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ABSTRACT

The conference reported on in these proceedings was held in June, 1974. The nine emerging issues in environmental education identified prior to the conference are: (1) skill training in environmental education; (2) environmental-social justice issue relationships; (3) the constituency of environmentalism; (4) the support system for environmental education; (5) the relationship between environmental education in schools and the structure and process of formal education; (6) environmental education and the concept of values; (7) local versus global perspectives; (8) autonomy and integrity of the learner; and (9) the relationship of environmental issues and economics. An essay and the edited texts of small-group discussions on each issue are given. Also included are the results of a survey on the views of environmental educators concerning emerging issues in environmental education and a checklist of criteria for planning and evaluating education programs which was developed based on the conference transcripts. (BB)

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National Working Conference

on

EMERGING ISSUES
IN ENVIRONMENTAL EDUCATION

Proceedings

Sponsored by:

Environmental Education Program
School of Natural Resources
The University of Michigan

and

Division of Technology and Environmental Education
U.S. Office of Education
Department of Health, Education and Welfare

June 3 - 6, 1974
Weber's Inn
Ann Arbor, Michigan

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Errata. Readers are advised to correct the following editorial or typographical errors that confuse or distort meaning.

- p. v, line 15. Change "evaluating education" to "evaluating environmental education"
- p. 25, line 24. Change "25" to "20"
- p. 49, line 14. Change "hope to process" to "hope to produce"
- p. 68, line 8. Change "terrible" to "terribly"
- p. 92, line 23. Change "Erlich" to "Ehrlich"
- p. 92, line 38. Change "reproductive" to "productive"
- p. 97, line 28. Change "by primary" to "be primary"
- p. 102, line 13. Change "who have the" to "who are the"
- p. 103, lines 35-36. Change "possible find. . .by bias" to "possibly find. . .my bias"
- p. 127, line 23. Change "make" to "they make"
- p. 129, line 13. Change "not apart" to "not a part"
- p. 139, line 17. Change "stop change" to "stop, change"
- p. 155, lines 11 & 15. Change "Schoenfield" to "Schoenfeld"
- p. 159, line 11. Change "base1" to "base"
- p. 195, line 3. Change "one's own positions" to "one's own position and the positions"
- p. 199, line 19. Change "precedence" to "precedent"
- p. 208, line 22. Change "value of the school" to "values of the school"
- p. 214, line 30. Change "What standards" to "By what standards"
- p. 221, lines 4-8. Change "is not much. . .are so different" to "is not so much. . .are not so different"
- p. 243, line 10. Change "moralizing the way" to "moralizing, the way"
- p. 279, line 8. Change "with with one" to "with which one"
- p. 289, line 17. Change "mediation" to "meditation"
- p. 314, line 22. Change "sensibility" to "sense"
- p. 335, line 27. Change "conference of" to "conference or"
- p. 336, line 21. Change "have has" to "have had"
- p. 347, line 26. Change "get in it" to "get powerful in it"
- p. 352, line 15. Change "affects" to "effects"
- p. 352, line 22. Change "ULSL" to "U.S."
- p. 353, line 21. Change "reasonable free" to "reasonably free"
- p. 367, line 12. Change "that is not" to "that is"
- p. 375, line 8. Change "our" to "out"
- p. 381, line 32. Change "in" to "an"
- p. 396, line 2. Change "heard the" to "heard about the"
- p. 425, line 16. Change "direction" to "directions"
- p. 468, line 5. Change "take over" to "take precedence over"
- p. 487, line 8. Change "through to" to "through"
- p. 506, item 12. Change "1.44" to "1.44**"
- p. 509, item 14. Change "4.50" to "4.50**"
- p. 520, line 19. Change "Environmental" to "Environmental Education"
- p. 522, item 9. Change "the formation about social" to "the social"
- p. 531, item 38. Change "other control" to "other-control"
- p. 536, line 1. Delete "0 1 2 3 4 5"

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INTRODUCTION

This book is the result of a three-day conference on "Emerging Issues in Environmental Education," held in Ann Arbor, Michigan, in June, 1974. The conference, together with extensive pre-conference research and post-conference documentation, was funded by the Office of Environmental Education (now the Division of Technology and Environmental Education) of the Department of Health, Education and Welfare. It was planned and coordinated by the faculty and students of the Environmental Education Program of the School of Natural Resources, University of Michigan. Although DTEE and the Environmental Education Program played important roles in the design of the conference, the perspectives and insights that emerged were principally those of the twenty participants. They came to the conference with many viewpoints, and left three days later still with many viewpoints--but with a better understanding of their own positions, the positions of others, the areas of agreement and disagreement, and the future course of environmental education.

The purpose of these proceedings is to disseminate that understanding. The conference planners and participants do not have a monopoly on wisdom; indeed, much was said at

the conference that some will consider somewhat lacking in wisdom. The strengths of the conference were twofold: the diversity of perspectives represented, and the explicit stress on emerging rather than current or past issues. The weaknesses stem from the strengths--an overarching tone of conflict, a tendency toward vagueness and rhetoric, and some difficulty hearing what others have to say.

In putting together the proceedings, the conference staff has not tried to hide these weaknesses. Rather, we have attempted to document the conference as fully and objectively as possible. Often we have reproduced documents, presentations, or dialogues from the conference. Where this was not practical, we have edited or summarized the events and issues. Always the goal has been to capture both the content and the mood of an experience that most of us found fascinating, frustrating, and fruitful.

Chapter One introduces the conference much as it was introduced to the participants--with a list of conferees, and several efforts to delineate and discuss the background and goals of the conference as perceived by the staff and participants.

Chapter Two concerns the nine emerging issues identified prior to the conference. It includes the complete text of a pre-conference essay on each issue, and the edited texts of small-group discussions on the nine issues, conducted concurrently during the first full day of the conference.

Chapter Three reports the remainder of the conference, as various groups of participants split up to work on the problems that concerned them most, then gathered together to share and debate their insights. The participants' formal and informal evaluation of the conference is also reported in this chapter.

Chapter Four considers the results of a survey on the views of environmental educators around the country and of participants at the conference concerning emerging issues in environmental education. These results provide a solid data base for assessing the attitudes of environmental educators, the attitudes of conference participants, and the relationships between them.

Chapter Five is a checklist of criteria for planning and evaluating education programs. The checklist was developed by the conference staff based on the conference transcripts; letters of response from participants comprise an integral part of the final checklist.

Comments from participants on these proceedings are included as an appendix.

CHAPTER ONE

The Background and the Beginning

The conference began shortly after 8 p.m. on Monday, June 3. The site was a conventional motel-modern meeting room at Weber's Inn in Ann Arbor, Michigan--an environment that several participants later complained was sterile and alienating.

As the participants arrived and registered, they each received a name tag and a conference packet. The packet contained several background documents that were presented orally later in the evening; a list of the participants; information about hotel rooms, meal hours, and the like; information about Ann Arbor and the University of Michigan; and a blank note pad. A Polaroid photograph of each participant and staff member was pasted to a sheet of paper with the participant's name and taped to the wall of the meeting room, in an effort to humanize the room and help the conferees identify each other.

These are the twenty invited participants and six staff who were present at the conference:

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The first event at the conference was a welcome and introduction from Bunyan Bryant, conference-coordinator. The following is an edited transcript of his remarks:

My name is Bunyan Bryant. I welcome you to the first Environmental Education Conference on Emerging Issues, co-sponsored by the Office of Environmental Education and the University of Michigan Environmental Education Program. As I thought about this conference, I didn't know quite what to say at this important event. I didn't know what to say within the short period of time allotted me. I promised my colleagues that I would be short, which will hopefully be the nature of the other presentations at this conference. This conference is different in that my presentation will be one of the few presentations. We felt that we had involved a number of highly knowledgeable and skilled people and we all can learn from one another. This is a ~~working~~ conference for the accomplishment of certain goals and tasks.

Emerging issues are best described by a story told to me many years ago in church by my minister. Even though it is archaic I still feel that it has significance today. I would like to relate that story to you. A seven year old boy who had become bored with himself sought out his mother to play with him. He said, "Mother, come outside and play with me, I'm bored and can't find anything to do, nobody will play with me." "Can't you see that I'm reading the paper, Johnny?"

said his mother, slightly irritated. But Johnny was persistent. "But I can't find anyone who will play with me -- come on, Mother." "Go away," exclaimed the mother, "Can't you see that I'm busy?" "But I want you to play with me." he said, as he tugged at his mother's elbow. In disgust and frustration the mother looked around the room and saw this world map on the desk in the corner. Suddenly she had this creative thought. She confiscated the map and tore it into tiny pieces and gave it to Johnny and told him: "Here, take this map and put it back together again and by the time you're finished I'll come and play with you." Johnny begrudgingly stormed off with the pieces and within five minutes he was back. "Mother," he said, "I'm finished." The mother looked around in disbelief and asked, "Why Johnny, how did you finish so quickly?" And Johnny said, "Well, on the back of the map there was a person and when I put the person together I put the world together."

Although this story is old and simplistic I still think it has relevance to environmental education. Within the field we are going to have to decide whether to deal with the environment as solutions to problems, or whether to deal with people as solutions to problems, or whether to deal with both the environment and people. I have some definite ideas about which to emphasize, but will not share that information with you at this time. I'm quite

sure it will come up in the context of this conference. To me the story typifies some of the basic issues within the field, and I do expect such issues to be raised and dealt with over the next three days.

Now I would like to slow down on this part of the presentation and talk a little about our expectations over the next few days. One place to start is with the goals and objectives of the conference, which I want to share with you now. One goal is to develop clarity on emerging issues in environmental education

Another goal is to use our individual and collective resources to help us develop criteria and evaluative instruments to: a) serve as a yardstick to measure existing environmental education programs, and (b) serve as an index for proposal evaluation. Let me say a little more about that. One of the ways of getting at emerging issues is via development of criteria for evaluating programs and proposals. Further, the Office of Environmental Education wants the Michigan group to come up with a set of criteria; we want your input. We are not particularly interested in coming up with one set of criteria, but rather multiple sets that reflect some of the thinking that has gone on here at this conference. The criteria that come from this conference will not apply to all proposals. Yet, maybe it's a start in the right direction.

A third goal is to develop strategies for change based upon emerging issues in environmental education. I'm sure that we will gain a lot of insights throughout this conference that will have implications for change in environmental education.

Let me talk about conference outputs -- i.e., long-ranged. From this conference we expect to publish proceedings on what went on in the conference, issues dealt with, strengths and weaknesses. Further, we want to develop an evaluative instrument, i.e., we will be taking input from this conference and will put together a series of concepts that can be integrated into an evaluative instrument for judging proposals and programs. This output will not come about until some time after the conference. We do not expect a final product from this conference along these lines.

The conference climate is important and let me say a word about that. The group that is gathered here will be task-oriented; we want your full participation in helping us accomplish certain conference goals and objectives. As mentioned before, there will be few formal presentations and we expect people to work. We support confrontation and expect to get it with such diversity. We support the kind of confrontation that is constructive and done respectfully, and we know that some of you will be affected

directly and others indirectly as we deal with the issues over the next few days. Further, we don't expect consensus on issues but expect individual and group differences; it is not our goal to move toward consensus, but we do hope the majority of you will feel "closure" on at least some of the many and varied issues that will be surfaced. There will also be both large and small group discussions. Small groups are important to maximize the participation, and large groups are important to share out information on what's been going on in the small groups.

Now let me switch and talk about what we can expect over the next few days. Tonight there will be small group discussions on expectations you have of the conference and some discussions of issues. Also, Peter Sandman will pass out a questionnaire to collect data on how this group feels about certain environmental issues; the results from this group will be compared with the results of a much larger group that was sampled before the conference. We will feed back the results and comparisons within the next few days. Tuesday, we will spend all day in small group interview sessions on issues dealt with by the pre-conference working papers. Tuesday night, however, we will discuss general criteria for evaluating environmental

education programs and proposals. Such criteria are to be built around the emerging issues in environmental education. Wednesday morning, each group will share out criteria to the total group. Following this, small groups are to formulate criteria for evaluating environmental education in different settings such as K-12, community and media. Wednesday afternoon, participants are to divide into three groups to design a project on energy, transportation, or pollution. Wednesday night, groups are to share out projects and compare them with the pre-established criteria. Thursday morning, there will be comparison of questionnaire results with those out in the field along with group discussion. Also, Thursday morning, participants will subdivide into two groups to: 1) strategize on how to move the field of EE to where the criteria say it should be, and 2) strategize on how to use EE to achieve social justice. Thursday afternoon there will be a summary and evaluation of the conference.

At this point, I would like to introduce the staff of the conference. We have Pete Sandman who's in communication, Bill Stapp in instruction, and Jim Crowfoot in advocacy, and myself, also in advocacy and dean of the conference. Judy Gingert is the administrative assistant, so if you have any problems see Judy; and Bill Hansen is a research assistant. Now let me slow down a bit to see if there are any questions [end of speech].

There were many questions. Most centered on the development of criteria for planning and judging environmental education programs. Some participants saw this as a futile exercise; the Office of Environmental Education, they argued, will probably ignore or distort the document. But most participants saw the criteria as exerting great control over the future of environmental education, especially if they were used by OEE as the basis for funding decisions. Of those who viewed the criteria as potentially influential, many considered this a necessary or at least a desirable development. Yet many others did not want to bear the responsibility for formulating criteria for the field at large--some because they were reluctant to wield so much power, some because they were opposed to rigid guidelines as a technocratic threat to pluralism in the field. And still other participants were willing to help develop criteria, but were suspicious of the responsiveness and accountability of the staff in constructing an instrument based on those criteria.

In response to these comments, the staff argued that criteria were desperately needed to help guide the field of environmental education. Because of the diverse views represented at the conference and the stress on emerging issues, several exploratory sets of criteria were planned, rather than one consensus document. A change in vocabulary,

from "criteria" to "checkpoints," seemed to allay some fears and reservations. The staff promised to address more explicitly the issue of its accountability to the participants later in the conference; a discussion of staff accountability was later scheduled for Wednesday evening.

The issue of staff control was also raised by several other sorts of questions and comments. Several participants criticized the environment of Weber's Inn, a complaint that the staff acknowledged but said it was unable to change at that point. (The later efforts of some participants to move various sessions to nearby parks or homes were successful in a few instances, unsuccessful in others because of transportation and time constraints.)

Others commented that the schedule for the conference seemed too rigid, too overplanned by the staff. The staff responded that the agenda for Wednesday and Thursday could be redesigned to meet emerging needs--as indeed they eventually were. The schedule for Tuesday--interviews on the nine issues identified prior to the conference--was not changed. Participants were invited to ask about switching the two issues they had been assigned for the interviews if they felt they had been misassigned, but none did so. In response to comments that the authors of the pre-conference papers should be present at the interviews, those research assistants still

in Ann Arbor were reached by telephone and invited to attend; five of the nine were available Tuesday for the interview on their topic.

After this question session, all conferees were asked to sit down with two other people they did not know prior to the conference, to discuss their goals and expectations, their backgrounds, and their reasons for attending. Fifteen minutes later each person was asked to find two more strangers and repeat the process. All of us then wrote on a sheet of paper our goals for the conference, our concerns or reservations about the conference, and anything else we wanted others at the conference to know about us. These sheets were taped to the wall next to our photographs; they stayed there throughout the conference and were revisited and altered as our goals and reservations changed.

Bill Stapp then presented a brief summary of the history of the Office of Environmental Education for those at the conference unfamiliar with this agency. The summary was based on a longer discussion of OEE contained in each participant's conference packet. The packet document read as follows:

In October of 1970, the President signed into law the Environmental Education Act, which is intended to address the environmental education needs of all citizens.

Under authority of the Act, the Environmental Education Program (EEP) was established in December 1970 within the Office of Priority Management. Seven staff positions were allotted for EEP, five professionals and two clerical. The staff was housed in temporary quarters in the regional office located in the Government Services Administration Building.

In October 1971 EEP became the Office of Environmental Education (OEE) and was located under the Deputy Commissioner for Development. The staff allocation of seven remained firm for fiscal 1972, with plans to increase that staff to thirteen. Because of periodic manpower freezes, uncertainties of budget, and the recent decision to exclude the grants program from the fiscal year 1974 budget, the plan to enlarge the staff could not be implemented and the actual number of staff members on board during fiscal 1974 has been six.

In October 1971 the National Advisory Council for Environmental Education was formed to serve as a resource for OEE policymaking. It held an initial meeting in December 1971 and has subsequently met in various locations around the country in full or subcommittee sessions. In their first annual report the Advisory Council made several recommendations concerning program priorities for OEE.

FUNCTIONS AND ACTIVITIES

Grants Program

In fiscal 1971 \$2 million was appropriated through a supplementary bill under the authority of the Act and designated for grants and administrative costs. Around 2000 proposals were received and evaluated, and 74 were selected for funding. (See Tables I and II).

In fiscal 1972 \$3.514 million was appropriated to the Office for grants and administrative costs. Close to \$3 million of this was awarded to 162 projects in every state, the District of Columbia, the Marianas Islands, and Puerto Rico (See Tables I and III).

In fiscal 1973 \$3.180 million was appropriated to cover grants and administrative costs. The nationwide developments in environmental education that took place in the previous three years and the knowledge of national environmental education activities gained by the Office over this time makes it possible for the Office to grant funds to those programs that most clearly promise to advance the art of environmental education and to fill the most urgent needs.

One of the most important objectives of OEE's funding activities is to attract longer-term and more substantial financial assistance from all sources, private and governmental, to local project sites. In the three years of the program's existence, funding from other sources has increased. In fiscal 1971 approximately \$3 million from other Office of Education

Table I. FISCAL YEAR 1972 ENVIRONMENTAL EDUCATION AWARDS, BY CATEGORY, AS COMPARED TO FISCAL YEAR 1971 AWARDS

CATEGORIES	1972 E.E. AWARDS	1971 E.E. AWARDS
	# of Awards	# of Awards
Type A: Workshops	33	36
Type B: Statewide Evaluation and Dissemination	11	5
Type C: Pilot Projects		
Personnel Training		
(A) Inservice Educational Personnel	4	1
(B) Inservice Noneducational Personnel	4	1
(C) Preservice Educational Personnel	1	-
(D) Preservice Noneducational Personnel	1	1
(E) Government Personnel	1	1
Total Personnel Training	11	4
Community Awareness		
(F) School-Community Models	1	1
(G) Environmental Education Centers	14	6
(H) Citizen Participation Projects	10	11
Total Community Awareness	25	18
Instruction and Curriculum		
(I) Elementary & Secondary Programs	7	1
(J) Supplementary Materials	18	1
(K) Curriculum Development	38	8
Including Media Projects (K ₂)	3	
Total Instruction and Curriculum	66	10
Evaluation and Dissemination		
(L) General Evaluation	1	1
(M) Dissemination: Information Dissemination	12	0
(N) Dissemination: Information Clearinghouse	3	0
Total Evaluation and Dissemination	16	1
GRAND TOTAL	162	74

Table II. FISCAL YEAR 1971 ENVIRONMENTAL EDUCATION
AWARDS, BY TYPE OF ORGANIZATION FUNDED

Type of Organization	Large Grants Funded	Amount of Grant	Small Grants Funded	Amount of Grant
Universities, four- year colleges, and community colleges	14	\$363,036	5	\$ 37,900
Local and state education agencies	6	365,000	3	26,200
Community education programs	2	87,000	4	37,750
Private environmen- tal organizations	3	99,000	8	71,100
Private educational organizations	6	271,400	2	17,487
Other private organizations	2	65,000	8	67,660
Public agencies	3	103,554	5	36,521
Museums	1	19,000	--	--
Libraries	1	50,000	1	4,869
TOTAL	38	1,422,990	36	299,487

Table III. FISCAL YEAR 1972 ENVIRONMENTAL EDUCATION
AWARDS, BY TYPE OF ORGANIZATION FUNDED

Type of Organization	# of Awards	\$ Funded
Institutes of Higher Education	34	599,900
Private/Other	29	497,450
Local Education Agencies	29	486,000
Private Educational Organizations	11	381,750
Private Environmental Organizations	25	376,850
Public Agencies and Organizations	7	194,940
State Education Agencies	6	176,950
Museums	4	111,800
Community Colleges/ Vocational Education Schools	9	87,300
Private Elementary and Secondary Schools	4	56,600
Public Libraries	3	29,500
TOTAL	162	2,999,040

(OE) programs, including the Elementary and Secondary Education Act, the Education Professions Development Act, and the Cooperative Research Act, were provided for environmental education projects. For fiscal year 1972 a descriptive list of projects totaling over \$11 million in funds, together with evaluations of their potential contributions, was submitted to the Commissioner of Education.

Technical Assistance

Technical assistance requests have far exceeded the OEE ability to respond. Nonetheless, considerable attention has been given to this part of the strategy. Non-monetary assistance has been provided to numerous federal, state, and local agencies and to private organizations during the past three years, including:

1. Assistance in the design of specific environmental awareness projects planned by the Environmental Protection Agency, the Army Corps of Engineers, the National Park Service, and Action.
2. Cosponsorship of interagency training sessions involving personnel from sixty operating units of the federal government. These sessions were held in order to exchange information, materials, and ideas concerning environmental education development throughout the government and the country.

3. Provision of contract funds for development of a training program in integrated pest management and control. This activity was carried out under the joint sponsorship of the Council on Environmental Quality, the Department of Labor, the Environmental Protection Agency, and the Office of Education.

4. Cosponsorship with the Environmental Protection Agency of the President's Merit Award Program.

5. Participation in preparations for the United Nations Conference on the Human Environment, held in Stockholm in June 1972.

6. On-site consultation to numerous projects throughout the country, many of which were funded under auspices other than the Environmental Education Act.

7. Environmental education training sessions for regional office personnel, primarily within HEW, are being conducted at the present time. These regional office training sessions are also attended by personnel from other federal agencies, state agencies, and private organizations located in the region. From the experiences gained from the training activities conducted thus far, OEE is completing the design of a prototype training program process that can be used for training activities in other regions of the country.

Program Development

Evaluation. During the past three years, grantees have been asked to evaluate their projects and to include their findings

in their final report. In addition, most of the projects funded under the Act in fiscal 1971, 1972, and 1973 have or will be visited by OE personnel or outside experts engaged by OE.

Information Dissemination. The following are highlights of OEE's continuing dissemination activities:

Publications. A wide variety of materials have been published or distributed by OEE. Published materials include:

1. The New Environmental Education Program of the U.S. Office of Education (booklet)
2. Education that Cannot Wait (booklet)
3. Environmental Education Handbook (draft version)
4. The Case for Environmental Education (article)
5. (Assorted bibliographies on various environmental education topics)

Materials distributed by OEE include:

1. "Earth Day" Year Around by Judith Serrin (article)
2. Environmental Encounters by Victor Schlich (article)
3. Environmental Education Cannot Wait by S. P. Marland, Jr. (article)
4. Manpower Training Goes to College by Guy P. Million (article)

5. Environmental Education (from the first annual report to the President and the Council on Environmental Quality from the Citizens' Advisory Committee on Environmental Quality, October 1970)

6. Aids to Environmental Education, Grades 7-9
(booklet)

7. Pass It On (brochure of the President's Environmental Merits Awards Program)

8. The Environmental Problem (book)

9. Ecological Drums Along the Cuyahoga (article)

Speeches and Articles. Members of the OEE staff have delivered numerous speeches and appeared on many panels at meetings and conferences around the country; this sort of information dissemination has been actively pursued since the formation of the program. Articles, written by OE and OEE personnel or by reporters, have appeared in several journals and magazines over the last two years and have helped explain the program and its progress to the public.

THE FUTURE

In January of 1974, the Office of Environmental Education joined the Educational Technology Program and the Educational Broadcasting Facilities Program under the Division of Technology and Environmental Education. This merger has provided the resources to have a more comprehensive impact on environmental education.

On May 11, 1974, the President signed into law PL 93-278 (Environmental Education Amendments of 1974), a bill to extend the Environmental Education Act. The Act authorizes expenditures of \$5 million in Fiscal 1975, and \$10 million and \$15 million, respectively, for the following two years.

Budget hearings are now taking place to determine if funds will be appropriated to implement the Act.

After Stapp's presentation, Pete Sandman reviewed the history of planning for the conference. This presentation, too, was a summary of a document in the conference packet, entitled "The National Conference on Environmental Education--How We Got to Where We Are." The written report read as follows:

Almost exactly a year ago, the Office of Environmental Education notified us that it had approved our grant proposal. The title of the proposal clearly states what we promised OEE to do: "National Working Conference to Develop a Position Paper on Environmental Education and Accompanying Evaluative Instruments."

From the very beginning, we decided that there were two kinds of issues that the conference might productively attack--current debates in environmental education that could

be resolved, and emerging issues in environmental education that could be introduced. We wanted the position paper and evaluative instruments emerging from the conference to reflect both kinds of issues. In other words, we wanted to consolidate what could be consolidated, but also to open up new avenues for thought and action. Accordingly, we made two firm decisions: (1) that the roster of conference participants should include not only environmental educators, but also persons from other movements with important perspectives to contribute to environmental education; and (2) that the conferees should play a major role in proposing evaluative criteria for environmental education.

In July of 1973, we mailed a brief questionnaire to 300 environmental educators (using Bill Stapp's personal mailing list). The questionnaire asked for suggestions on: (1) current issues to be resolved; (2) emerging issues to be introduced; (3) little-known readings to be shared; and (4) exciting people--especially from outside the field--to be considered as conferees. Questionnaires were returned by 150 people. At the same time, we made up our own list of eleven issues that the four of us thought deserved more attention than they were getting from environmental educators.

As the questionnaires started coming back in August, it became very clear that current debates and emerging issues were not separate categories as we had thought. The emerging issues suggested in the questionnaires--as well as our own--incorporated most of the major current debates, but from different perspectives. We therefore decided to focus the conference on emerging issues.

With the help of two student research assistants, we spent most of the fall studying the questionnaires, and the mountains of reading suggested in the questionnaires. We finally came up with a list of nine emerging issues, and a page of description and analysis on each issue.

In January, nine student research assistants were hired, one for each issue. Their task was to produce a short paper including: (1) the relevance and importance of the issue; (2) the range of perspectives regarding the issue; (3) provocative questions useful in thinking about the issue; and (4) references for further reading about the issue. In order to do this, the research assistants read the relevant questionnaires and readings suggested by the questionnaires; they also did their own library research. As the papers developed, the staff worked closely with each research assistant. The result is the pre-conference document mailed to you last month.

Meanwhile, a second questionnaire was prepared, made up of five key statements about each of the nine emerging issues. Respondents were asked to rate their agreement or disagreement with each statement, and also to state how important they considered each statement to themselves as environmental educators. This second questionnaire went out to all those who answered the first, and to everyone who received an OEE grant in 1972 or 1973. About 350 questionnaires were mailed out; over 200 were returned. The questionnaires provided information about the current attitudes of environmental educators toward our nine issues. They were used by the research assistants in writing their papers, and by the staff in designing the conference. We decided to give the conferees a chance to fill out this questionnaire as well, and to spend some time at the conference comparing the responses of the large sample with those of the conferees.

In April, we began selecting the conference participants. The first round of questionnaires had produced literally hundreds of suggested names; the research assistants had contributed others based on their reading, and we had still others in mind based on our contacts and experiences. Our criteria in selecting the 25 conferees were as follows: (1) A mix of environmental educators

and people from relevant fields outside environmental education; (2) A mix of practitioners and scholars, but with a heavy emphasis on practitioners; (3) A mix of people involved in school systems and people who do environmental education outside of schools; (4) Diversity with regard to race, sex, geographical region, and human settlement type (rural, urban, etc.); and (5) Participants with strong interests and diverse perspectives on the nine emerging issues to be discussed. The process of selecting participants and inviting them to the conference continued through late May.

Conference planning was largely dictated by earlier decisions. Because this was to be a working conference, small groups were used for most activities. One major focus was to be the nine emerging issues. Another was to be the development of criteria for evaluating environmental education projects. The conference proceedings and evaluative instruments that we had promised to OEE were to emerge organically from events at the conference itself. We hope and expect that they will.

Questions following these two presentations centered again on the issues of criteria building, staff control, and staff accountability.

Before breaking up, Bunyan Bryant reminded the participants of their assignments for the Tuesday morning interviews. He stressed that the interviews would take place in groups of 4-6 people, and would be documented by tape and stenographer for use in the proceedings and in developing the criteria. Participants were asked to read the relevant portion of the pre-conference document if they had not already done so, and were again offered an opportunity to inquire about moving to a different issue.

Finally, each participant was asked to complete a questionnaire dealing with attitudes toward 45 "position statements" relevant to the nine emerging issues. This was the same questionnaire that had been distributed to hundreds of working environmental educators prior to the conference. The results of the survey and the differences and similarities between the two groups would be the topic of a discussion on Thursday morning.

The session ended at 10:15 p.m. Some of the participants went directly to their rooms; others visited the restaurant, the bar, or the swimming pool; others stayed and talked. After a short meeting, the staff joined the participants in informal conversation.

CHAPTER TWO

The Nine Emerging Issues

From the very beginning of the planning process for the conference, the staff was interested in two kinds of issues--current debates in environmental education that the conference could try to resolve, and less obvious "emerging" issues that the conference could introduce and begin to consider. This notion was reflected in the first questionnaire (mailed to 300 environmental educators), which asked for separate suggestions about these two kinds of issues. When the questionnaires were returned, however, it quickly became clear that current issues and emerging issues were not separate, air-tight categories. Most of the current and emerging issues suggested by people in the field were the same issues, with different interpretations and different aspects emphasized, but the same issues nonetheless. We therefore decided to focus the conference on emerging issues, hoping that this emphasis would shed some light on the current debates as well.

Four staff members and two research assistants spent most of the fall of 1973 studying the questionnaires that

were returned, and the readings suggested in the questionnaires. Based on these inputs and our own perspectives, we finally came up with a list of nine emerging issues, and a page of description and analysis on each issue.

The nine issues selected were the ones that seemed to reappear most often--sometimes explicitly, often just hinted at--in the questionnaire responses and in the readings urged by the respondents. These are the nine:

1. Skill training in environmental education
2. The relationship between environmental issues and issues of social justice
3. The constituency of environmentalism
4. The support system for environmental education
5. The relationship between environmental education in schools and the structure and process of formal education
6. Environmental education and the concept of values
7. Local versus global perspectives in environmental education
8. The autonomy and integrity of the learner in environmental education
9. The relationship between environmental issues and economics

Of the nine issues, three--social justice, constituency, and economics--deal with environmental problems and the environmental movement generally; all three are aspects of environmentalism of special importance to environmental educators. The other six issues deal explicitly with environmental education itself: its goals (skills, values); its ethics (learner autonomy); its emphases (local versus global); and the context in which it takes place (support system, formal education). There are, of course, other emerging issues of importance--population, for example, and the relationship between environmental protection and energy supply. But in mid-1973 these nine were uppermost in our minds and the minds of those who answered our questionnaire.

Once the nine issues were chosen, nine research assistants were hired, one for each issue. Their task was to produce a short paper outlining: (1) the relevance and importance of each issue; (2) the range of perspectives regarding the issue and the value base of each perspective; (3) provocative questions useful in thinking about the issue; and (4) references for further reading about the issue. To do this, the research assistants read the relevant questionnaires and readings suggested by the questionnaires; they also did their own interviewing and library research, and consulted frequently with the staff. In addition, the research assistants contributed questions to

a second questionnaire designed to measure the attitudes of environmental educators toward various aspects of the nine issues. The results of this survey, which was returned by more than 200 environmental educators, were available to the research assistants as they wrote their papers.

All nine pre-conference papers were mailed to the conference participants about a month in advance. Several weeks later, the participants were told that the first day of the conference would be devoted to group "discussion-interviews" on the nine issues. Each participant was assigned two issues, based on the participant's background and interests.

Four issues were discussed Tuesday morning from 9:00 to 11:30. The discussions ran concurrently. Participants were:

1. Skills training in environmental education
Jo-Ann Albers
Dean Bennett
Alice Cummings
Alan McGowan
George Moore (research assistant)
Bill Stapp (staff)
2. The relationship between environmental issues and issues of social justice
Rod Allen
Bill Bryan

Jim Crowfoot (staff)

Ethel Hackney

Ruth Hepburn

Laurie Lamson (research assistant)

David Sutton

3. The constituency of environmentalism

Bunyan Bryant (staff)

Joe Chadbourne

Chuck Roth

Michele Russell

Bob Vogl

Doris Welcher

Elaine Wong

4. The support system for environmental education

Anne Adamcewicz

Bill Casello

Willie Hodge

Jerry Mander

Bob Roth

Pete Sandman (staff)

Five issues were discussed Tuesday afternoon from 1:15 to 3:45. Participants were:

5. The relationship between environmental education in schools and the structure and process of formal education

Jo-Ann Albers

Dean Bennett

Joe Chadbourne

Willie Hodge

Michele Russell

Bill Stapp (staff)

6. Environmental education and the concept
of values

Rod Allen

Bill Bryan

Bunyan Bryant (staff)

Alan McGowan

George Moore (research assistant)

Chuck Roth

Doris Welcher

Thelma Wurzelbacher (research assistant)

7. Local versus global perspectives in
environmental education

Anne Adamcewicz

Ethel Hackney

Bill Hansen (research assistant)

David Sutton

8. The autonomy and integrity of the learner in
environmental education

Bill Casello

Alice Cummings

Judy Gingert (research assistant)

Jerry Mander

Pete Sandman (staff)

9. The relationship between environmental
issues and economics

Jim Crowfoot (staff)

Ruth Hepburn

Bob Roth

Bob Vogl

Elaine Wong

Prior to each discussion, the staff "interviewer" prepared a list of discussion questions, based on the pre-conference paper and the questions at the end of that paper. The discussion questions were handed out to the participants in advance. At the start of each discussion, participants were invited to prioritize the questions or add new ones.

The discussions varied considerably in both content and tone. By and large, the morning discussions were characterized by a tentative feeling-out of value differences. Participants tended to share speaking time fairly, but often did not respond explicitly to each other; each would state his or her position at length, then wait quietly while others did the same. The afternoon sessions, by contrast, were either highly conflicted (with participants confronting each other more directly) or very low-key (with participants apparently avoiding areas of disagreement).

Apart from this general trend, each discussion was unique in many ways. In some, the participants found

themselves in basic agreement; in others, they discovered fundamental value differences. The participants in some discussions were evenly matched, either all fairly expert or all fairly new to the topic; in other discussions one or two participants had a near-monopoly on relevant experience and information. Some discussions centered on means toward achieving desired goals; others concentrated on exploring the goals themselves. Some were active and enthusiastic; others moved very slowly indeed.

Each discussion was tape-recorded in its entirety. In addition, a stenographer was present at each discussion, to note the names of the speakers and resolve any possible ambiguities in the tapes. In the weeks following the conference, the stenographers transcribed the tapes and produced as complete and accurate a transcript as they could. The transcripts averaged 30-40 single-spaced typed pages apiece.

Each transcript was then edited by the staff to approximately one-third its original length. Some of the editing was dictated by mechanical problems; sections of the tapes were garbled, incoherent, or missing altogether and had to be eliminated. The rest of the editing was aimed at conveying the sense and tone of the discussion; repetitious and irrelevant passages were cut, and long "position statements" were abridged.

For reasons of space, some interesting comments were also eliminated, with great reluctance. The edited transcripts were then mailed to the discussion participants for comment and correction.

The remainder of this chapter treats the nine emerging issues one at a time, first the four "morning" issues and then the five "afternoon" issues.

Within each issue, the research assistant's pre-conference paper is first reproduced, as it was mailed to the participants. Then come the discussion questions prepared by the staff and handed out to the participants. Finally comes the edited transcript of the discussion itself. Minor word changes and short abridgements are not indicated in the transcripts. Longer abridgements involving a move from one topic to another and indicated by a dieresis (" . . ."). At the end of each discussion transcript is a brief interpretive comment on the discussion by the staff "participant-observer" who was there.

The reader is urged to bear in mind that the pre-conference papers do not necessarily represent the views of the participants, and that statements in the discussion transcripts do not necessarily represent the views of the staff or other participants. All of it represents an honest effort to understand and deal with emerging issues in environmental education--an effort that we know was enlightening to the staff, that we believe was enlightening to the participants, and that we hope will be enlightening to readers of these proceedings.

Skill Training in Environmental Education

By George Moore in consultation with project staff

Introduction

As we look around us, environmental and societal problems become more real. In order to work toward the solutions to such problems, we can no longer be concerned with traditional ecological problems. Youth and other citizens must become involved in the political processes that can bring equality to all citizens. This necessitates education related to up-grading urban life. In order to accomplish this, educators must assist people in gaining the skills that will help them to successfully become involved in environmental problem-solving and the political process.

The United States is predominantly an urban nation. Presently this country comprises approximately six percent of the world's population yet consumes over fifty percent of its resources. Energy consumption has increased without much consideration to the ecological and social implications associated with such growth. For the most part, our cities have become poorer as the more mobile and economically-privileged citizens have left the inner city. This has resulted in an

increase in environmental stresses on those citizens unable to move away. With these stresses have come many of the social problems that are identifiable in today's society. What types of skills associated with the problem-solving process are necessary if such stresses are to be relieved?

The following pages on skill training will consider problem solving to be an action-oriented process composed of certain skill areas (examples will be provided). The skills associated with this process have both diagnostic (e.g., data gathering) and action (e.g., political) orientations. It should be stressed here that those skills traditionally thought to be diagnostic in nature frequently may include action phases. Problem-solving skills, then, are those skills necessary to the total process.

Skill Training

Environmental educators are interested in creating a citizenry that is able to identify and help work toward the solution(s) to problems associated with the total environment. In order to achieve this subgoal, formal and non-formal educational experiences must begin to develop the necessary problem-solving skills in citizens.

The development of problem-solving skills is viewed as being an important goal of both society and education. If

citizens are to be effective in their efforts to resolve environmental problems such as urban blight, transportation, neighborhood deterioration and crime, a knowledge of the local political system and its operation is vital. The citizen must know the types of questions to ask and of whom to ask them. If changes are to occur, such skills and knowledge are important. Studies conducted by Hess and Torney, however, show that public school graduates lack knowledge about political systems and how they function.¹

"Without a knowledge of pressure groups, the role of political parties, the limits of individual power, legitimate methods by which to influence their government, and the role of mass media, youth lack a good foundation for effective participation."^{1a} Other researchers point out that these same youth are unable to solve problems that they face daily. Hess and Torney further point out that the role of political parties and partisanship receives virtually no attention in the elementary school and only minimal attention in secondary schools.²

In the mid-eighteenth century, Benjamin Franklin referred to a necessity for balance between the "useful and the ornamental" in education. He saw an important aspect of the "useful" concept as being the development of specific skills to better enable citizens to deal with "their affairs of life."³

If we are to effect environmental change, an effective citizenry must be developed. In order to accomplish this, it is important to provide opportunities that will allow individuals to gain the necessary skills.⁴ What might those skills include?

The environmental problem-solving process might be divided into two skill areas. Each area would be comprised of specific skills.

Diagnostic P. S. Skills

The first problem-solving skill area - diagnostic problem-solving skills - is traditionally considered to be nonaction oriented. Such skills would include:

1. Recognizing and defining a problem.
2. Recognizing central issues of the problem.
3. Recognizing and collecting useful data and other resources.
4. Organizing and analyzing data and other resources.
5. Recognizing biased information.
6. Developing alternative solutions to the problem.
7. Evaluating the alternative solutions.
8. Developing a plan of action.

It is highly likely that a contemporary approach to training in these skills would, in fact, include action. If, for

example, a student wanted to study the solid waste problem in his community as it related to the development of a recycling center it might prove worthwhile for the student to work at a recycling center.⁵ As a result of this experience, data relating to the problem can be obtained. Providing the opportunities for students to work in the community, gathering data relating to the identified problem goes beyond the traditional approach to data collection.

Critical thinking is a skill area many researchers feel is tightly linked to problem solving. Such studies hold that critical-thinking skills can be improved only by involving learners in problem-solving experiences.⁶ McGarry, however, hypothesizes that learner involvement in problem solving is not necessary in order to develop critical-thinking skills. Most important, he feels, is a basic understanding of generalizations.⁷

While McGarry's contentions are supported by his data, many researchers (Cousins, Cox, Massialis and others) feel that individual behavioral patterns are dependent, to a large extent, on critical-thinking skills.⁸ It appears, then, that while these skills can perhaps be obtained by focusing on concept learning they are an essential part of the problem-solving process.

In his doctoral study, Rothstein identifies six critical-thinking skills:

1. Comparing sources of data.
2. Interpreting data, drawing inferences and finding assumptions.
3. Identifying strong and weak arguments.
4. Evaluating thinking as to its relative criticalness and dogmatism.
5. Developing sensitivity to language and meaning.
6. Drawing conclusions from evidence.⁹

Rothstein concludes that instruction focusing on training students in the area of critical thinking results in their ability to apply those skills to different situations. Furthermore, such an instructional approach does not sacrifice the learning of facts by those students.¹⁰ In a later study Divine focused on one related skill area - listening skills. He further demonstrated the transferability of these skills and their development in both high and low intelligence level students.¹¹

Unfortunately, it appears that many school teachers use methods that, while unintentional, suppress critical thinking on the part of students.¹² Too often students who are good thinkers receive poor grades. It appears that such students are questioners, questioning the reasons for some assignments and statements made by teachers and others.¹³ Fleming further demonstrates that there is little correlation between critical thinking and teacher grades.¹⁴

Action-Oriented Problem-Solving Skills

(It should be stressed that there are many different models for bringing about planned social change. Each model stresses the importance of different skills and different actor roles. This section will briefly discuss six models and some of the skills associated with each.)

The most controversial skills are those revolving around planned change. In the past, most school systems have avoided taking an active role in controversial issues. Since public schools are dependent upon public funds, this is understandable. Environmental educators recognize the importance of the development of social change skills. If social justice questions revolving around racism, sexism, ageism, resource distribution and use, etc., are to be answered, the schools must begin to provide the opportunities needed to train students in planned social change skills.

Alinsky has stated that "the building of many mass power organizations to merge into a national popular power force (that will be able to effect change) cannot come without many organizers."¹⁵ A proper problem then is finding and training effective organizers and citizen activists.

The training of these people must stress the concepts and skills associated with "organizational problems, analysis of power patterns, communication, conflict tactics, the education and development of community leaders," and the abilities

to diversify the issue (i.e., demonstrate that the issue is multifaceted).¹⁶

Again, concept development is stressed. Too often trainees do not understand that a situation "is significant only in its relationship to ... a general concept."¹⁷

Alinsky and others stress concept development because they feel that no situation ever repeats itself.

Since power "is an ingredient of human action,"¹⁸ most change models are dependent upon its effective use. (Power is defined as being the ability to exercise influence¹⁹ in altering a social system.)

As stated earlier, many change theorists have categorized their thoughts on planned change into general models. These models are identified by the strategies they emphasize and the skills they utilize in effecting planned social change.²⁰

Chin and Benne have identified three models. The rational-empirical model presents an optimistic view of man. This model stresses cognitive and technical knowledge based upon the premise that man is reasonable and will follow his rational self-interest once it is revealed to him. Members of this school of thought stress teaching and research skills. They believe that the knowledge flow is from those who know to those who don't know. Practitioners would most likely feel that professionals are best equipped to initiate change. Students would play a very minor role in bringing about planned

change. A major problem associated with the rational-empirical approach is that "information is useful to people only when they are receptive to it."²¹

A second model, normative-re-educative, assumes that individuals are guided by sociocultural norms. Changes occur by focusing on attempts to alter attitudes and values in addition to increasing knowledge. Skill training in the area of attitudinal change and values clarification is stressed. Again, the primary change agents are predominantly individuals in "professional" fields.

The third model proposed by Chin and Benne is the power-coercive model. Here, political, economic and moral power is the basis for bringing about change. Political and economic sanctions are frequently imposed upon the target group in efforts to bring about change. Strategies associated with this model use legitimate coercive power (courts, legislatures, etc.) as well as extralegal methods. Organizational skills and skills associated with effective use of the mass media are most important.

Of the three models thus far discussed, the rational-empirical model is "the philosophical foundation of the American educational system."²² This is understandable since the normative-re-educative approach emphasizes

personal values, and the power-coercive approach operates within the political arena--both are controversial.

Other change strategists identify the models differently. Crowfoot and Chesler identify the professional-technical, the political and the counter-cultural models²³ of planned social change.

The professional-technical change agent possesses the skills needed to help a client system and a target group overcome the inertia associated with maintaining the status quo. Furthermore, this professional provides definite ideas as to problem solutions and shows the client "how to" bring about the desired change through consensus.²⁴ Many practitioners reserve this role for trained professionals; however, Havelock supports the thesis that students can effectively²⁵ play the role of the professional technical change agent.

The political model recognizes the importance of political and economic sanctions. The strategies and skills associated with this model are similar to those described in Chin and Benne's power-coercive model. Such models are least accepted by public school administrators. If they are to be engaged in, a broad, powerful base of community support is needed. These models based upon political, economic and moral²⁶ power have limited potential in school programs. The major objection is the high visibility and risk associated with action of this type. According to Vogl, superintendents prefer students

to deal with the administrative hierarchy before enlisting the help of community leaders. If students do become involved in community issues, most superintendents prefer that environmental agencies are contacted rather than the offender. Superintendents are reluctant to allow students to define a local business interest as the change target. Unsurprisingly, school administrators prefer that students follow governmental channels in attempts to effect planned social change. Extra-legal activities or the use of economic power are unacceptable.²⁷

A final model of planned change is described as being the counter-cultural model.²⁸ Practitioners see change as being desirable and prefer to live within their own social framework. They frequently remove themselves from the existing society and attempt to form a cooperative society modeling their beliefs, attitudes and values.

The skills associated with the six models discussed can be summarized as follows:

1. Knowledge-use skills.
2. Intervention skills, including the ability to intervene at the proper time.
3. Skills associated with the ability to create a perceived crisis.
4. Skills that provide for the effective use of resources and data.

5. Skills associated with coalition formation.
6. Skills associated with negotiation and consensus.
7. Skills associated with the ability to show the relevance of related issues to the project.

It should be realized that planned change models rarely stand alone. Strategies must be intertwined and the change agent(s) must be competent in knowing what strategies to use and how to mix them.

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A final skill area that is developing and cannot be separated from the action phase of the problem-solving process are those skills emphasizing environmental communications. Skills focusing on interpersonal communication are extremely important to all environmental education skill areas.

Alinsky recognizes that an organizer (activist) cannot be effective if he is unable to communicate. If an individual is to be a successful communicator, he must realize that "one can only communicate and understand in terms of one's experience...."

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Advertising agencies have effectively used the media and persuasion techniques to sell goods. Training in the area of mass persuasion is necessary not only for change agents. By developing these skills in the general citizenry environmental educators can begin to assist individuals in growth in other skill area (i.e. recognizing biased information, critical thinking, listening skills). Research in the area of environmental communication skill identification and training is lacking. These skills and others are becoming increasingly more important

if educators are to work toward the solutions to social problems existing at a local, state, national or international level.

The problem-solving process is predicated upon action in all stages from information gathering through problem resolution. Educators and others agree that development of such action-oriented skills is important. While there is consensus on the importance of such development, only limited data pertaining to this process is available.³¹ Educational research shows that skills are best learned through learner involvement. If this is the case, activities associated with skill development must be identified, developed and incorporated into the curricula. Only by involving the learner in the total process can schools hope to process effective citizens.

Key Questions

1. What skill areas are most important to focus on if increased environmental quality with increased social justice is to be realized?
2. Recognizing the importance of dealing with basic social issues, how might environmental educators help public school systems in becoming more responsive to the problems underlying these societal issues?
3. What activities or methods have been developed to assist learners in gaining the needed skills?
4. What types of formal and non-formal education are most conducive to skill training efforts?

5. What resources are available in the area of environmental skill training? How might these resources be improved and better utilized? What types of resources need to be developed?
6. How should educators deal with the philosophical and political problems associated with skill training?
7. Which schools of thought on planned change should be taught by the schools? Should they vary in relation to the class and race backgrounds of the students?
8. Different schools of thought on social change view social power differently. Given that some schools of thought focus on redistributing power, should the school be concerned with teaching such strategies?

Related Questions

1. Are teacher training programs presently preparing teachers to provide social change skills? If not, how might these programs be improved?
2. Which skill areas are most environmental educators deficient in? What can we do to learn these skills and to help our colleagues learn them?
3. Since students are in school for less than one-third of a day, how can skill training be reinforced by and within the community?
4. The citizen action role proposed by environmental educators is an innovation in education. Since high visibility is inherent in citizen action, how do we make this acceptable to present school leaders and the community at large?

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29. Bryan, op. cit.
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Diagnostic Aspect of Problem-Solving Process

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Hess and Torney report the results of their studies on the presence of political attitudes in elementary and

secondary school students. This is an assessment of what attitudes are present, how such attitudes are formed and what attitudes and knowledge need to be developed.

2. Massialis, Byron and C. Benjamin Cox, Inquiry in Social Studies (New York: McGraw-Hill, 1966).

The authors attempted to review the major ideas of educational reform. The book supports a problem-solving process as a basic tool in creating effective citizens.

3. McGarry, Eugene, "An Experiment in the Teaching of Reflective Thinking in Social Studies," (Ames, Iowa: unpublished doctoral dissertation, University of Iowa, 1961).

This study tests the assumption that involvement in concept learning as opposed to factual learning develops critical thinking skills to a higher degree. His data support that assumption.

4. Patton, Bobby and Kim Giffin, Problem Solving Group Interaction, (New York: Harper and Row, 1973).

The authors look at the problems associated with group dynamics. They propose possible solutions to improve group dynamics as they relate to the problem-solving process.

5. Rothstein, Arnold, "An Experiment in Developing Critical Thinking Through the Teaching of American History", (New York: unpublished doctoral dissertation, New York University, 1960).

Rothstein matched eleventh grade students in American history according to mental abilities established through testing. This study shows that an experimental group in which skill training was emphasized gained in critical thinking and acquired the same amount of information when compared to the control.

Action-Oriented Problem-Solving Skills

1. Alinsky, Saul, Rules for Radicals (New York: Random House, 1971).

Rules for Radicals is a definitive work stressing the development and use of strategies associated with bringing about planned social change.

2. Bennis, Warren, et al., (eds.), The Planning of Change (New York: Holt, Rinehart and Winston, Inc., 1969).

This collection of readings is divided into four parts: The Evaluation of Planned Change, Elements of Planned Change, Dynamics of Planned Change and Values and Goals of Planned Change. It presents different view points toward those areas.

3. Bryan, William L., Jr., "An Identification and Analysis of Power Coercive Change Strategies and Techniques Utilized by Selected Environmental Change Agents", (Ann Arbor, unpublished doctoral dissertation, University of Michigan, 1971).

Bryan conducts an in-depth survey of power coercive change strategies. In his study, the author has interviewed a number of nationally known environmental (total) change strategists. The study assesses the effectiveness of various tactics commonly used by practitioners of this model.

4. Havelock, Ronald, The Change Agents Guide to Innovation in Education, (Englewood Cliffs, New Jersey: Education Technology Publications, 1973).

This handbook describes a model for bringing about planned change in the educational milieu. Havelock discusses the various skills and strategies needed to effect change. Included in the appendix is an annotated bibliography discussing "Major Works on Change in Education."

5. Vogl, Robert L., "Selected Illinois High School Superintendents' Assessment of Citizen Action Roles for Seniors Seeking Environmental Reforms." (Ann Arbor: unpublished doctoral dissertation, University of Michigan, 1973).

Vogl describes the development of an instrument used to assess administrator opinions of acceptable action on the part of high school students. He relates the responses of rural and urban superintendents to the three models of planned social change proposed by Chin and Benne.

Miscellaneous

1. The Journal of Applied Behavioral Science, (Washington, D.C.: The National Training Laboratories).

This Journal is published quarterly and attempts to "improve communication between researchers in fields such as anthropology, economics, political science, psychiatry, psychology," and group leaders. It focuses on change.

Interview Questions

1. What kinds of skills should the recipient of an environmental education program possess? What are the major categories?
2. What kinds of skills are generally lacking in our populace?
3. What kinds of skills are most environmental educators deficient in? (Community organizers, communicators, and teachers).
4. What can be done to help environmental educators acquire these skills and to enable them to transmit these skills to others? Must an environmental educator acquire particular skills as a prerequisite for helping others to acquire the same skills?
5. What skills are best taught in schools (primary, secondary, collegiate) and what are best taught beyond schools? What coalitions are needed for skill training?
6. Are there people in society whom we do not want to help acquire skills?
7. What activities, methods, or procedures have been developed to assist learners in gaining the needed skills? Are these processes different for instructional, media and advocacy programs?
8. What type of skill training processes or resources need to be developed?
9. What types of formal and non-formal education are most conducive to skill training efforts?
10. Are leadership training programs presently preparing leaders to handle skill development? If not, how might these programs be improved? Where are the better skill training programs? Is the university the best place to offer skill training? Where are the best opportunities to obtain skill training?
11. What are the major constraints to skill development activities? How might the constraints identified be overcome?
12. The citizen action role proposal by environmental educators is an innovation in education. Since high visibility is inherent in citizen action, how do we make this acceptable to present school leaders and the community at large?

Interview Participants:

Jo-Ann Albers
Dean Bennett
Alice Cummings
Alan McGowan
George Moore
Bill Stapp

- B. Stapp: This session is designed to focus on skill training in environmental education. We probably all realize that a major focus of environmental education is skill training. One can look at any of the proceedings or reports issued by the U.S. Office of Environmental Education and note that skill training is vital to the field of environmental education. Most of the emerging literature written outside of the Washington scene also points to the importance of problem-solving skills. . . .
- A. McGowan: I don't feel entirely comfortable, but I can't think of any additional questions that need to be asked to ease my discomfort. I think that George [Moore, author of working paper] has done a pretty good job of addressing the issue, at least raising the issues that need to be addressed. That is, to deal with the skills that are necessary, that connect or illustrate the fundamental connection between the problem of the environment and some of the other problems of social and economic justice. I think that there is a fundamental connection. I think that that connection is arrived at by using environmental education as a way to gain insight into the workings of society. Therefore, what I think is the most seriously needed skill is "looking for where the bodies are buried." Looking for some of the fundamental flaws, not just testing the water and finding it dirty. Looking at some of the economic situations that leave the water dirty. Also the political situations that lead to that. Ask them if they are concerned about lead poisoning. What are the economic determinants of lead-poisoned homes? We use those words so often that they lose their meaning,

but I think that these things are the jugular that need to be considered if youth are going to be affected in school.

- B. Stapp: What are the major categories in the area of skill development?
- D. Bennett: I could speak for the work that we've done. We have tried to identify categories of skills that we can evaluate by the effect of the program, and we also have been conscious of developing the process approach. In other words, one skill should lead into another skill. For example, we feel that one fundamental skill would be that of discovering why an investigation is needed. That is, gathering information and knowing how to compile it. This is followed by analysis of material that they have gathered. This skill is very essential in order to make judgments on the information they have gathered. It frequently stops at gathering, before the students have had the opportunity to make judgments and really find any meaning in the information they have gathered. A second major category is evaluation. This means setting up criteria so that you can make judgments on information that you have gathered and applying these criteria to that information. Other skills call for investigating alternative solutions to choose from and developing a plan of action.
- B. Stapp: Isn't all of this a part of the same process?
- D. Bennett: It could be called problem solving.
- A. McGowan: I think probably the most important part is to get data without pre-judging what the data are going to show. We often find that a problem is solved by someone saying they must go after a certain type of data to prove a point of view.

J. Albers: There needs to be something to ensure that all the available data are identified and are considered. I don't see problems thoroughly investigated. Solutions are based upon partial information and looking for the flaws and argument approach, and they leave out a whole segment. We usually find that it is in the social-economic area that material has been left out.

A. McGowan: True, although you find some of the material in other areas as well. There are lots of bodies buried to find in the whole environmental-energy area. What scares me is that I think we only found a few of them.

J. Albers: I think that this applies to every major concern.

A. McGowan: I think that that relates to another concern, as Dean said, very traditional. It's the traditional way in which science works. That is, through open publication of data and the results, and then it is criticized. That spirit of free inquiry is not present in schools and we don't find the opportunity for them to develop their own studies and present them before their peers to be criticized. They don't have opportunities to present papers to audiences of their peers or even scientists. It is really very rare when you can find a student who can identify a problem, some kind of research plan with which they answer a series of questions. You find a lot of Ph.D candidates that can't do that.

D. Bennett: That is a skill of being critical of the information. From my common knowledge, talking from a public school point, they just gather information, and that's it. Perhaps it is from a lot of pressure to get a certain amount of information within a certain amount of time. That keeps teachers pushing ahead without adequately going through the information they gather.

- A. McGowan: That is a weakness in schools. I think there are a lot of reasons why that occurs. We have not really nurtured students to effect changes in schools.
- B. Stapp: Based upon our conversations up to this point, can we organize the skills that have been identified into any type of a sequence? Would one grouping of skills rest in the area of "problem solving" and "critical thinking"? Where does "social change" fit into the picture?
- A. McGowan: When you say "social change" what do you mean by the statement?
- B. Stapp: Many problem-solving procedures go through the process of collecting information and then never do anything with that information. It is frequently important to identify the target that needs to be changed and then to work through a strategy to change that target. It seems that some important skills are the ability to: listen with comprehension; recognize a problem; identify a problem; collect information; organize information; analyze information; generate alternatives; develop a plan of action; and to work toward the solution of environmental problems. To solve an environmental problem takes a lot of sophisticated social skills because you may need to organize, build coalitions, use the media, etc.
- A. McGowan: You define "social change" as changing people?
- J. Albers: Changing their thinking?
- A. McGowan: I would define "social change" as different. Social change to me does not mean behavioral modification. If you say "social change", I might ask, who to change. That implies that that would be the group you want to change. I don't think that that is what "social change" is
- A. McGowan: I don't think that you get anywhere by trying to identify problem solving skills, because each person is developed in a different way.

For instance, "listening skills." Now that is a very nice skill to have. However, many effective people I know don't listen very well. To have a catalog of all kinds of skills you wish people to have is not productive. What I think would be productive is for us to identify some of the key skills that we want our students to have, and look at how to develop those skills. What are the mechanisms? We need educational reform. We talk a lot about it, we don't do much about it. We said that we wanted to reform education. But we haven't done that. Let me put it another way. I think that in presenting options to people, all of the options have to be laid open. If cost-benefit analysis includes changing the economic system, then that option has to be laid out.

- J. Albers: All information has to be documented and put out. But it does seem to me that the idea of effecting change, that you have somebody deciding, based on perhaps limited knowledge, what is a desirable change.
- A. Cummings: But conversely, Jo-Ann, I too believe in man's rationality, but he needs motivation and strategies.
- J. Albers: But I think that formal education is the place for that.
- A. McGowan: There is a sense in which I agree with you. The formal education system is never going to work against itself, which is what it would have to do if it became involved in this, in any other way than to co-opt the forces of change that exist. That is a large part of what the environmental education program has done. I agree that information is important. I think we have to recognize that information is a political tool and is used as such, rather than us blandly giving information to the people and let it fall like rain on flowers, the flowers will bloom. We have to recognize that very often we have to take it away from those that have it and give it to those that don't have it.

- B. Stapp: If you take the area of identifying key skills, what do you say are the key skills, not whether they are lacking or not, but what are they?
- A. Cummings: Recognition of a problem would be one.
- D. Bennett: This goes along with what I would have thought of.
- A. Cummings: First you recognize, then you go into what your approach will be.
- D. Bennett: If you want to look at the overall, I would say that the second skill is to how to apply individual skills listed.
- A. Cummings: Going back to the recognition, you mentioned something earlier about having a feeling of a lack, and sometimes you cannot verbalize what that problem is. You must have a gut-feeling that something isn't right.
- A. McGowan: If we hadn't gone on television and literally called a particular firm a liar, then a lot of information would not have come out. They gave out information because they wanted to prove that they were not liars. So confrontation sometimes produces very dramatic results.
- J. Albers: Oftentimes it is a matter of getting information that is not available. The other side has bits and pieces that you don't have. So then you say, "I have to have these pieces." But if you don't have all these pieces, then you are ignoring their side of the issue.
- A. McGowan: Exactly. I don't know how that relates to a skill, but sensitivity to political-economic problems, that is when you are dealing with a question, you have to be sensitive not only to the problems of poor or working people, but also to the fact that there is a political process, and that some firms are quite willing to suppress information. This is a part of recognizing the gaps and that the gaps do exist. The fact that there is a Freedom of Information Act tells you that it is necessary.

- A. Cummings: I feel that communication skills are the greatest thing that we have.
- J. Albers: I am grounded in presenting the information and letting people decide.
- G. Moore: Are you operating on the assumption that man is basically a rational being?
- J. Albers: Yes.
- B. Stapp: You are saying that man is rational, and you are operating off a process of just presenting information.
- J. Albers: I don't like educators that set out to manipulate. I think educators should set out to share information.
- D. Bennett: I would like to believe that people are rational, too. I don't think we should manipulate. But I don't think in reality that all people are rational, at least not to the public good. There is a sense of priority among the people. They have special interests. Yet realistically we do have to utilize change strategies for public goals as well as individual rights. We get back to this hassle we have between the private individual and the public good. It would be good to give out that information and hope for rational use of that information to benefit all people. We find ourselves running back into the area of change strategy.
- B. Stapp: People are probably not going to change significantly. If a change is going to occur, then it probably means a change in their values.
- J. Albers: I have nothing against that. But the only way to teach them is by a public forum where everybody can have opportunity to participate.
- B. Stapp: But the process is not to preach values. The strategy is to help people clarify their values so that their choices are more consistent. If there was a shift in an individual's values, then choices associated with that shift will probably also occur.

- A. McGowan: I agree with that. Again you are implying that a necessary change would be a change in values of the people who live in the United States. I do not believe that values are the root causes in the environmental problem. I think what is fundamentally wrong lies in the heart of the productive enterprise.
- B. Stapp: Aren't there a lot of wrong values that people hold?
- A. McGowan: Not by individuals. I think there are values that people have that are used to support a given political and social system. Those are not fundamental values. I think that the fundamental values of the people in the United States are perfectly fine. They all want good food, they want good things. I would really be opposed if anyone wanted to change those values. That is why I am incensed over behavior modification.
- D. Bennett: Why are we in the mess we're in then?
- A. McGowan: I think that we are in the mess we're in because the economic system produces things for profit rather than for social good.
- D. Bennett: Isn't that a value?
- A. McGowan: The value of the system.
- B. Stapp: One tremendously important question is if people will change based on receiving information alone.
- J. Albers: They have to have this information. I think that we have moved from the land into a city and we have forgotten a great deal of things regarding what nature does when you mistreat it. People do things because they are ignorant
- B. Stapp: If it is important that the populace have some type of skills, must an environmental educator have those skills pretty much in hand before he can really be effective in teaching? That is, should a teacher acquire certain problem-solving skills in order to prepare students for citizenship roles? Should teacher training programs deal with problem solving?

- A. Cummings: I say yes.
- J. Albers: Certainly, if teachers cannot recognize the aspects of a problem, they won't be able to get it across to somebody else. It is necessary.
- D. Bennett: In order to recognize deficiencies, I agree with that. I would have to say that is a prerequisite. Now the extent to which an environmental educator has the skills is something else. They should have the skill to the extent that they have some experience in using problem-solving skills.
- B. Stapp: Are those skills best taught within the school setting or outside the school setting?
- D. Bennett: Sometimes the efficiency of education and working within the time constraint demands that you have to teach them within the school setting. I have the feeling that a good teacher could teach the skills and their application almost anywhere. I think it is desirable to give as much first-hand experience as possible. I think that a good teacher will be able to work with what he has. Maybe that is a mark of a good teacher.
- A. McGowan: I think that is true, although I think that one of the first prerequisites is that a good teacher be allowed to be a good teacher. That very often is a problem because by the time a person has learned to dodge and fight school administrators, very often he has moved on to something else.
- A. Cummings: As an extension to that, I don't think that it should be an exclusive right of the schools. I think that it must be broader based; you must include the total community.
- D. Bennett: What type of coalition would you try to develop?
- A. Cummings: I would like to see the separation of teacher and parent dissolved because they are really polarized. Parents resent the teachers, they don't really understand their function; and conversely, when a parent tries to enter the school to understand their children's progress, they are frequently rebuffed. If they could be team-mates, it would be desirable to the community.

- A. McGowan: That statement troubles me. Not that I disagree with it; there are few school systems where it is an open situation and you can walk in at any time. There is a difference between home life and school life, which needs to be recognized. I don't think that school is the place to teach certain values which should be the prerogative of the home. On the other hand, I think that there are certain things that ought to be taught in schools, such as reading skills. I feel funny, because that is a very traditional point of view.
- B. Stapp: If a teacher is really good in helping people develop problem-solving skills, would there be anyone that you would not want to acquire these special skills? Let's say if you felt very strongly about someone who was a racist, is there any way that you would hold back to keep them from acquiring certain skills so as to keep them from using the skills against you or society?
- A. Cummings: I wouldn't. You are saying that they do not have the basic goodness that you have and that they would not use the skills in a constructive way.
- A. McGowan: I think that is true. From my personal view, there are groups of people that I would not like to have any skills at all. I would not like the American Nazi Party to have very good organizational skills. Yet, I would not go out of my way to avoid giving that group of people organizational skills.
- A. Cummings: They could change and adopt some of your values.
- A. McGowan: I don't think that as a society we can afford to put on constraints like that. We can't say this group is going to have certain skills and that group is not going to have those skills. But I would rather work with one group over another. It gets cloudy, like when you talk about freedom of speech; I think that that freedom has been badly abused.

- G. Moore: You're talking about the whole scope of justice. If you are interested in social justice, then you as an individual cannot say that you are not going to let a certain group possess the skills that you have.
- J. Albers: That's assuming that they don't have anything of value to contribute, and I don't think anyone can make that assumption anywhere.
- A. McGowan: I think that places it in a different context. Over the years, we have found that we are not giving out information and letting it fall like rain. But we do give information to groups that we think need it. We have been severely criticized by our own members for just giving information to unions about occupational hazards and safety procedures and not dealing even-handedly with the management. But the reason that we do that is because management already has the information, but they keep it from the workers. To even the balance, we are sometimes required to make choices like that. That does not mean that you are denying the skills or information. I think that it is based upon a realistic assessment of the situation. It is not just a question of personal definition, I think that it is more than that.
- D. Bennett: Here again we see the relationship between values and skills; and I would say certainly from society's standpoint that we should try to help everyone out with skills. If we help him acquire skills, we should be concerned with the fact that along with skills comes social justice and social responsibility.
- B. Stapp: How would you go about helping individuals acquire problem-solving skills?
- J. Albers: Give them problems.
- A. McGowan: The scientific method is to get them into a lab, out in the field, or in a library and go to work.
- B. Stapp: So you are saying that part of the learning skill is going through the process itself.

- A. McGowan: Yes. You have to do it. To learn how to read, you have to read. The idea that you can teach writing in an English class by writing a few two-page compositions in a quarter is ridiculous. The same thing is true of problem-solving skills.
- B. Stapp: If you want individuals to develop problem-solving skills, would you develop a series of individual skill-developing activities to help students acquire individual skills, or involve students in helping to solve a particular problem?
- J. Albers: Give them simple problems to do that are pretty much cut and dried and with a conclusion to reach. Then give them increasingly complex problems to do.
- A. McGowan: Let them define certain problems themselves, the certain kinds of things that you want them to learn. Before you can get them to solve problems, you have to teach them how to use the instruments that are necessary for doing that.
- G. Moore: But to use your analogy, let's talk about playing tennis. You don't just stick a person on a court and tell him to play tennis. But rather you focus on each individual part of the game, right? You give him the opportunity to practice each of the individual skills of the game and then you try to have the individual combine certain skills.
- A. McGowan: But if that's all a person did was to practice one point, what would be the motivation in learning how to play tennis? It is fun because it is a sport and you learn how to play. You put into practice those skills that you learned. We become motivated to learn when we are in a situation and find that we lack something. By getting people involved, you develop the motivation needed to learn. We saw kids poring over books for hours; you'd never get them to do that in an ordinary classroom situation. They were involved and they had a need to know.
- B. Stapp: But you had activities to help students learn how to use equipment that they would need to use in the future.

- A. McGowan: Yes, but the need for learning to use that instrument is not a big deal. The most important thing to learn about an instrument is that it is not infallible. You learn that only by using it. There is practically no instrument that any high school student could learn that is terrible complicated or really very difficult.
- B. Stapp: How about the whole process of teaching youths? Do you see any major constraints to the problem-solving skills approach in schools?
- J. Albers: Just that they have to do it within the school setting. Not all of the pieces to a problem are within a school setting.
- B. Stapp: You are saying that there are some serious institutional constraints?
- J. Albers: You have to go outside to solve some of the problems.
- A. Cummings: You have the problem of administrative dictate, for one thing. We have a "we'll pay for one field trip a year" syndrome. There are economic constraints, vested interest constraints, and a number of other constraints

Comment by Bill Stapp:

The session began with each participant identifying his or her background. It was immediately clear that only one participant had done a great deal of thinking about skill training prior to the conference. This was borne out later when the participants were unable to identify any specific skill training programs around the country.

It soon became clear that three people were operating exclusively off a rational-empirical model of change, only one used a normative-reeducative model as well, and no one preferred a power-coercive model. This stress on rationality and empiricism led the participants to resist focusing on what skills were needed because there was "insufficient research" on the topic. It also emerged in the debate over the role of values in environmental education, and in the reluctance of the participants to endorse power-oriented "social change skills." The dominant view was that the responsibility of environmental education is to present the facts, not become involved in valuing or behavior modification. The participants agreed that skill-training should be offered to everyone, not just to particular constituencies.

My efforts to focus the discussion on specific skill needs were resisted as too structured, and the discussion remained abstract for the most part.

Because the first tape was recorded at the wrong speed, only the last two-thirds of the discussion was available on tape.

The Relationship Between Environmental
Issues and Issues of Social Justice

By Laurie Abbott Lamson in consultation with project staff

The degree to which environmental education has a responsibility to focus on issues of social justice as well as purely physical environmental problems is a new concern for many people. Conservation education has historically settled itself short of major concern for the social implications of environmental issues. And the environmental implications of social issues have never really been dealt with in any area of study. However, as concern for diminishing resources and population growth becomes more acute, issues of social justice will be tied in more tightly with purely physical environmental problems. Environmental education provides the opportunity for educators to recognize the overlapping of social, political, economic, and biological effects from any single action, and to begin to deal with the implications for social justice in those effects.

Such diverse issues as urban planning, sex education, and oil production all have a great influence in a number of areas. Urban planning involves the distribution of people over land, housing standards criteria, differences in living style due to such factors as classism and racism, and reliance

on a disproportionate amount of natural resources for a relatively small number of people. Sex education implies population limitation, freedom of choice for women or forced sterilization of minority and poor women as well as a myriad of other conflicting issues dealing with cultural integrity, disproportionate use of resources, and other social justice concerns. Likewise, oil production can be viewed in many lights. Arnold Miller, president of the United Mine Workers of America, recently stated that "you can't talk about coal without talking about energy. You can't talk about energy without talking about oil. You can't talk about oil without talking about politics" (A. Miller, 1973). The environmental effects of the "energy problem" cannot easily be separated from its effects on social justice. Control of coal and oil reserves occurs in a political context through the concentration of power and wealth. Those people most dependent on the outcome of decisions about energy are almost always people without political power and economic stability.

Thus almost any current issue can be thought of as having political, social, economic, and biological ramifications. And the nature of interrelatedness makes them environmental issues, the concern and responsibility of the environmental education movement.

Various Perspectives on Environmental Education and Social Justice

Environmental education can mean an education in a complicated web of issues including social justice considerations as well as biological concerns. However, with the population growth, resource exploitation, and technological advancements of the modern world, issues of environmental degradation can no longer be separated from issues of social justice. People, groups, and nations suffering from the greatest degree of environmental trouble are also the ones suffering from the most socially unjust conditions. This distinction between physical and social conditions does not hold up, and provides camouflage for the social roots of problems. Murray Bookchin put it this way: "The imbalances man has produced in the natural world are caused by the imbalances he has produced in the social world What we are seeing today, is a crisis not only in natural ecology but, above all, in social ecology" (Bookchin, 1970).

Perspectives on the Issue

Environmental education can treat issues of social justice and environmental degradation in many ways. First, as a systemic overview, environmental education could be a scholarly, dispassionate approach to the broad range of environmental problems. Emphasis would be on attaining an understanding of the complex interactions among political, social, economic and biological entities, while attempting

to treat these elements in a value-free manner. A reliance would be placed on information and problem-solving as the key elements in resolving environmental problems, while only secondary importance would be placed on issues of social justice. This approach is based on universal acceptance of values and goals, an overlapping of interests, and belief that authorities function for the good of the total system.

A second approach is based on many of the assumptions of the first. The common factor is belief in consensus; that is, social aims are believed to be basically similar, and a rational approach to problems is thought to result in mutually acceptable solutions. The major difference between these two approaches is in the method of defining a problem; the systemic overview approach is contrasted to a personal definition of problems specific to the individual or group. A personal approach to a problem would focus on skills training and knowledge of personal or group rights and responsibilities, and would imply some bias in the assessment of political and social interactions. Conflicts would be considered mainly a product of misunderstandings rather than basic differences in values and goals. And approaches to problems would be on an immediate basis, with no great concern for the concept of social justice or the need for a restructuring of social systems. An example of

this approach might be in a public complaint over air pollution emanating from a certain smokestack. With the skills and knowledge provided by environmental education, an affected group could work through political channels to come to a compromise with the offending company.

A third approach to environmental education could be grounded in terms of conflict and considerations of divergent interests of many social groups. This approach to problem-solving assumes that different groups might have conflicting interests. Views of problems would differ from group to group; what might be a problem for one group could be a solution for another. Farmers, coal miners, the management and owners of a coal company, and the consumers of that coal might have entirely different ideas as to the problems of strip mining. Is the problem loss of tillable soil, job safety, efficiency, or the cost of coal (A. Miller, 1973)? This approach to environmental education is based more fully on the implications for social justice involved in environmental problems, as well as on implications for environmental well-being in social justice issues. When goals and values are different, the distinction between the "have" and "have not" groups becomes apparent as part of the larger social and political system.

Isolation of problems becomes very difficult, and the problems are discussed in reference to their larger social impact.

Definitions of Social Justice

Apart from the place of social justice within different perspectives on environmental education, there is the issue of different approaches to defining social justice. A definition of this sort of concept takes place within a political system, and reflects the biases of the person making the definition. Because of this, it is important that environmental education be used as a means of discussing the effects of different analyses of social justice. The broad framework of environmental education is vital for determining the overall effects of a particular definition of social justice.

One definition of social justice is what might be called an intellectual mode, whereby an ideal redistribution of economic goods is discussed. Lester Thurow highlights past attempts at intellectual analysis of social justice, and discredits analyses that depend on technological advances to supply everyone with the basics of socially-defined needs. With current over-use of natural resources, the Marxian or conservative dream of superabundance and satiated needs as the answer to inequitable distribution of goods is no longer conceivable. Without changing the

social and economic structure of American society, it just is not practical to make enough cars so that every American family can have at least one. An overall environmental education approach could easily discredit this dream by pointing out the over-whelming resource shortage and pollution problems that would be caused. But more important, environmental education could link these physical problems to issues of social justice on a global scale by showing that class distinctions and racial hierarchies would become more pronounced as groups fought for available resources.

Thurow's intellectual analysis of social justice uses economic tools to redistribute available wealth. His definition of social justice is that no individual or group should be economically oppressed, but that an end of oppression cannot be attained through massive production. Thurow favors a redistribution of income and various goods and services according to individual work output, while falling back on a tax and transfer system (such as negative income tax) to provide for basic needs of the unemployed and those unable to work. Thurow believes this combination of economic tools would provide for basic needs while not discouraging work incentive.

Another means of defining social justice is in terms of an executive or legislative mode. This pragmatic view

of dynamics leading to justice is based on principles of redistribution being determined by accessibility to the legislative system. Kenneth J. Arrow rejects majority voting and the political process as means to the end of social justice, pointing out that:

. . . . there was no method of combination--no social decision rule (e.g., majority voting)--that could in all circumstances lead to a 'social ordering' without violating some seemingly mild and reasonable conditions. As a result, even the political process could not handle the question of economic equity perfectly. (In Thurow, 1973)

However the major consideration in this mode is of the problem of accessibility. In most environmental or social solutions in the United States today, people being adversely affected by a governmental or corporate policy have little power for access and less potential for influence. Daniel Zwerdling documents a case in Jacksonville, Florida, where a private corporation and governmental agencies allied under a policy to build a \$250 million factory for assembling floating nuclear power plants. The fight quickly became defined on industry terms between jobs for blacks versus destruction of a marshland. Whether or not the factory is built, blacks, environmentalists and the populace will all be affected because of the social and environmental ramifications of this sort of split between two potentially partisan groups.

A third notion of social justice could be stated in terms of a consciousness-raising mode. This more idealistic mode is based on the mobilization of affected groups of people. As opposed to the two preceding modes, this one is based on conflict rather than on consensus of opinion or interests, the attainment of a greater degree of self-determination, and an increase in the power of the group. Here sub-population definitions of justice are central, and there is the assumption of the necessity of negotiating definitions under conditions of relative parity.

Moralism can be the key for action in all three modes. Moral reasons for moving toward social justice are often the most basic and compelling, but they are not usually the most successful. A belief in human equality is necessary to encourage a definition of social justice that really is just. But biases about the relative worth of individuals based on racism, sexism, or classism will probably not lead to any real movements for a more socially just restructuring of the world. Thus a strong moral sense accompanied by consciousness of one's values and biases is necessary to the formation of the ideals of social justice, but moralism alone is probably not effective in working towards a new world.

Other major differences are evident in these three approaches to defining social justice, just as there are

differences between the three major approaches to environmental education outlined above. The major implication of this is that in both cases it is evident that the value-set and assumptions of the person defining the problem will alter the overall conception of environmental problems, the place of social justice in this conception, and the definition of social justice. What, for instance, is the major environmental problem in a ghetto? Is the problem inadequate regional planning and management, excessive air pollution, rats and lead poisoning, malnutrition due to inadequate income, and many other facets of racism and classism (Zwerdling, Hare, Love, and others), or "laziness" and "criminal tendencies" on the part of ghetto dwellers? These diagnoses are entirely different, and lead to very different emphases on and definitions of social justice as well as different strategies and goals for change. On the one hand, a partisan diagnosis might encourage concern over the distribution of resources and economic prizes, alternate transportation methods to help solve air pollution problems, as well as concern about evolving more just patterns of redistribution. On the other hand, an authority-based status quo diagnosis might encourage planning and managed reform or exclusion, repression, and extermination by disregarding the real questions of social justice. The choice of diagnoses encouraged by the environmental education movement is critical

in attaining goals of sound environmentalism and social justice.

Costs and Benefits: Diagnoses, Strategies and Goals

One of the primary issues in the impacts of environmental problems and their possible solutions is a determination of who pays and who benefits from both the problems and the proposed solutions. Nathan Hare believes that "the 'ecology crisis' arose when the white bourgeoisie, who have seemed to regard the presence of blacks as a kind of pollution, discovered that a sample of what they and their rulers had done to the ghetto would follow them to the suburb" (Hare, 1970). Willard Miller places the cause in the over-productivity of the private enterprise economy, while Kenneth R. Bowling has attacked the slow response of political and economic structures to the environmental crisis (W. Miller, 1972 and Bowling, 1970).

Each of these men has made a different diagnosis as to the cause of environmental problems, and each diagnosis leads to different solution proposals. However, it is very important to investigate every diagnosis and proposal for change to find how they affect the people involved. And this is the area in which environmental education can provide the background for a reasoned investigation of costs and benefits to make sure the proposals are structured to attain the desired goal. But more than this, environmental education can provide

a framework to evaluate the goal as well as the means for progressiveness in social orientation. It is at this point that environmental education comes to grips with the ideology of social justice to tie environmental concerns together with social ones. And it is here that some of the most meaningful advances against environmental problems and social inequality can take place.

Gauges which may be of help in determining the ultimate effects of diagnoses and goals include economic criteria, cultural or ethnic integrity, maintenance of self-determination, health considerations, and inequality of burden. With these gauges, one could determine who might benefit and who might bear the burden of the cost for any action or solution. In many cases, a full investigation of "who pays, who benefits" can lead to a reorganization of potentially regressive proposals. With these gauges one may also discover the ultimate effects of various strategies used to obtain certain environmental or social goals. If a strategy is used to reverse a certain problem, it is necessary that the means be consistent with the goals in order to avoid unexpected and harmful results. Thus a major focus of environmental education should be in the area of strategy research.

Two major types of strategies with differing effects have been isolated. Knowledge utilization is based on the

theory that a problem is caused by inadequate information flow between citizens and authorities, and that adequate information will influence decision-makers. The crux of the theory is that the right information brought to the attention of the proper authorities will result in favorable policy decisions. A partisan approach, on the other hand, is based on conflict and power. Different groups have different interests, and the group with the prevailing power will achieve favorable results. The proper strategy for a situation can be evolved after a cost/benefit analysis of environmental and social effects. And often the most successful strategy will be a combination of the knowledge utilization and partisan approaches. But in any case, a broad environmental education will facilitate arriving at a strategy that will achieve an immediate goal while furthering the broader aims of environmental improvement and social justice.

The structure of environmental education must also include studying the role of personal and group values in the assessment of strategies and goals for change. Hidden values and assumptions about the worth and equality of people and institutions affect the choice of means and ends. Thus, self-examination and consciousness-raising are highly relevant to environmental education. If a hidden assumption is that property is more valuable than human

lives, diagnoses, strategies and goals for change will reflect this. And the view that solutions to problems can be mutually exclusive produces different results from the view that solutions can be mutually satisfactory. Alternatives to proposals for change also reflect the degree to which personal values are questioned. Is the question framed in terms of "should we put the highway here, or should we put it there," or is the question expanded to "what sort of transportation do you need?" These two questions are entirely different, being based on divergent assumptions as to self-determination and reliance on expertise. And at a time when severe social injustice and environmental degradation are prominent, the degree of reliance on customary solutions is important. It is vital that environmental education help provide the framework for questioning old solutions and searching out new approaches to problems. At the same time, it is extremely important for the framework of environmental education to provide impetus for self-examination to determine whether actions have the desired effect.

Conclusion

Environmental education has several functions in the pursuit of a better world. Programs in environmental education can have the effect of raising people's consciousness about the unequal effects of environmental and social issues

due to such factors as racism, classism, ageism, and sexism. And environmental education can provide direction in the fight against environmental and social abuses, and the inequality of burden of those abuses. Such a program could also provide guidelines for assessing various strategies and goals in finding the best one for a certain case. And perhaps most important, a strong environmental education program could facilitate people's awareness of the effects of their own actions. All of these factors will help in the achievement of a world that is environmentally sound.

Key Questions

1. Should environmental education focus on issues of social justice, or mainly on more general social issues? What are the trade-offs involved in this choice?
2. Are environmental quality and social justice independent goals, or are they linked? Can one be achieved without the other?
3. What will be the effect of environmental educators trying to interest minority and inner-city youth in the broad concerns of environmental quality? Does this hint at classism and racism, and would the encouragement be aimed at quieting the cities rather than in providing constructive action?
4. What are the trade-offs in dealing with policy questions in terms of general public needs as opposed to dealing with the specialized needs of particular cultural, ethnic, or other groups of citizens?
5. Can environmental educators afford to remain aloof from pursuing social implications of potential environmental policy either in the classroom or in the area of politics?

6. What are the consequences of considering only social effects or only physical environmental effects when analyzing the costs and benefits of a strategy or goal for change?
7. What would the overall effects on urban and regional planning be if environmental education stressed the importance of diversification, decentralization, and economic and political parity of inner-city groups? What would the effects on social justice be?
8. How would encouragement of population limitation affect different white and minority groups and the power relationship between them?
9. How does the current political situation affect our country's need for energy? What would be the environmental and social effects of breaking up the energy monopolies?
10. What would be the differing effects of environmental education treating a land development issue in a scholarly, overview manner as opposed to treating that problem from a personal point of view? What would be the differences in treating that problem in the conflict of interests approach? What would be the difference in types of skills needed to attempt each approach?
11. How does the diagnosis of an environmental problem affect the choice of strategies for working on that problem? What are the effects on the environment, and what are the effects on local groups of citizens--especially on poor and non-white citizens?

Annotated Bibliography

I. Societal Diagnoses and Alternatives, Proposals

1. Wes Barthelmes. "The Coalition of the Clean; Pollution and the Poor." In Commonwealth. Feb. 20, 1970. Pp. 549-550.

This pre-Earth Day article stresses the importance of social changes and reordering of priorities as the basis of the environmental movement.

2. Murray Bookchin. Ecology and Revolutionary Thought. New York. Times Change Press, 1970.

Possibilities of decentralization, communalism. Equation of humanism with ecology; stress on the integrative aspect of ecology, and harmonization of people and nature through a balance of the human community with its natural environment.

3. W. R. Burch, Jr. "Fishes and Loaves: Some Sociological Observations on the Environmental Crisis. In Man and His Environment." F. Mergen, ed. Yale School of Forestry Bulletin, No. 76, 1970. Pp. 30-53.

Reassessment of issues; environmental issues are seen as linked to political life because the origins of natural resources is a concept originated by society, not the earth, according to Burch.

4. Lynton K. Caldwell. "Environment and Administration: The Politics of Ecology." In Environment, W. W. Murdoch, (ed). Stanford, Conn.: Sinauer Associates, 1971. Pp. 390-415.

Environmental measures are seen as reactions to disastrous consequences of previous interactions of human society with its environment. Need for comprehensive management of human environmental relationships suggested.

5. A Center Report. "Priorities in an Affluent Society." In The Center Magazine. Jan. 1970. Pp. 72-83.

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Klausner argues that the relation of society to its physical environment is governed by the society's definitions of its resources and the rules evolved for regulating social relations with respect to the environment. He concludes that fundamental solutions to environmental problems must include social solutions.

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10. Ritchie P. Lowry. "Toward a Radical View of the Ecological Crisis." In Environmental Affairs, vol. 1 no. 2. June 1971. Pp. 350-359.

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12. Willard Miller. "Radical Ecology: Going Back to the Roots." In The Michigan Daily, Sunday, Dec. 3, 1972. Special Feature.

All environmental problems are seen as interconnected and linked to economic and political structures. Capitalism is equated with growth and a socialist system with non-growth. His ideal is a really democratic political structure, a socialist economy, and non-growth philosophy.

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Rule analyzes the political nature of social problems, and asserts that there is great difficulty in treating social problems as non-political. He believes that these political conflicts cannot be treated with an apolitical solution.

15. David Shapiro. "On Psychological Liberation." In Social Policy. Jul/Aug 1972. Pp. 9-15.

The liberation of oppressed people involves a subjective or psychological liberation as well as an objective (political, economic or social)

one. Power relationships reinforce the ideology of the inferiority of the oppressed. An oppressed person having become psychologically liberated can then focus on the actual power relationships in a more effective way.

16. James Sullivan. "Pollution: Discrimination in Center City." In Environmental Action. Feb. 9, 1972. Pp. 3-5.

Sullivan expresses the discrimination in the inner city which the poor are exposed to through the levels of air and noise pollution. He states that very rarely are these problems attacked in an overall plan, and that if transportation controls are not imposed, noise and foul air will become another documented, unsolved affliction of the poor.

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A synthesis of one person's view of the "new conservationist": an environmentalist of spring, 1970, with many concerns--social, global, and ecological. A combining of student activism with environmental activism.

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This article contrasts the large amount of news space devoted to "ecology" to the acceleration of environmental degradation during the same period. Although there was a great amount of public concern, the environmental priorities in government were low, industry was still spending money to fight environmental devices, and conservation education was not including ecology in its curricula.

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Eco-Activist." In Youth and Society.
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5. Joseph Harry, Richard Gale, and John Hendee. "Conservation: An Upper-Middle Class Social Movement." In Journal of Leisure Research. Summer 1969. Pp. 247-254.

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The environmental movement--its structure, group members, and types of actions.

7. Ritchie P. Lowry. "The New Religecology: Salvation or Soporific?" In Social Policy, vol. 1, no. 2. Jul/Aug 1970. Pp. 46-48.

Lowry discusses the environmental movement in light of his appraisal of Americans as enthusiastic supporters of new mass movements, fads, crazes and religions.

8. Denton E. Morrison, Kenneth E. Hornback and W. Keith Warner. "The Environmental Movement: Some Preliminary Observations." In Social Behavior, Natural Resources and the Environment. W. Burch, N. Cheek and L. Taylor, eds. New York. Harper & Row, 1972. Pp. 259-279.

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9. P. J. Tichenor, G. A. Donohue, and J. K. Bowers. "Environment and Public Opinion." In Journal of Environmental Education, vol. 2 no. 4. Summer 1971. Pp. 38-41.

This article traces the development of environmental issues into social issues of public concern.

III. An Overall, Environmental Approach

1. Martin Brown. "Ecology for the People." In Sun Rise, vol. 2, no. 5. Dec. 1973. Pp. 13-15.

This is a radical social and economic analysis of environmental problems, using the role of over-population and Erlich and Hardin in the formation of the thoughts of "ecology." Brown explores the basis of socially repressive proposals as solutions to environmental problems which do not hit at the root of the problems.

2. Barry Commoner. "Workplace Burden." In Environment, vol. 15, no. 6. Jul/Aug 1973. Pp. 15-20.

Commoner states that in many real ways the problems of the environment are an extension of the problems of the workplace, and the same people are suffering the most. He calls for an alliance between workers and environmentalists because he feels they cannot reach their separate goals without joining in a common one: the reconstruction of the nation's reproductive system so that it conforms to the needs of the workers and the environment.

3. John Friedmann and Barclay Hudson. "Knowledge and Action: A Guide to Planning Theory." In AIP Journal. Jan. 1974. Pp. 2-16.

The authors focus on planning theory as it is presently taught in American universities, with planning seen as an activity centrally concerned with the linkage between knowledge and organized action.

4. Nathan Hare. "Black Ecology." In The Black Scholar. April 1970. Pp. 2-8.

This article presents a black man's feelings about the potential use of the environmental movement for the ultimate liberation of black people. But he states that the environmental movement has blatantly omitted the interests of blacks, and that the two movements stand in contradiction of each other.

5. Neil H. Jacoby. "What Is a Social Problem?" In The Center Magazine. Jul/Aug 1971. Pp. 35-40.

An examination of the meaning of social problems, asking the following questions: How do they arise, and escalate into crises? How can they be resolved?

6. Sam Love. "Ecology and Social Justice: Is there a Conflict?" In Environmental Action. Aug. 5, 1972. Pp. 3-6.

Love sees a split between environmentalists and minorities, and he calls for a recognition of mutual problems (such as city and workplace pollution), redistribution of resources, and a stationary economy dedicated to living a good life.

7. Thomas Nagel. "Reason and National Goals." In Science, vol. 177. Sept. 1, 1972. Pp. 766-769.

Nagel states that national resource allocation cannot be rational if it is not ethical. He makes a case for the need to make fundamental analyses of major national resource allocations. He puts forward four points of consideration: paternalism, elitism, distributive justice, and a distinct national interest.

8. Harold Sprout. "The Environmental Crisis in the Context of American Politics." In The Politics of Ecosuicide. L. L. Roos, Jr., ed. New York. Holt, Rinehart and Winston, Inc. 1971. Pp. 41-50.

Sprout argues that the environmental movement will not be passed off as a fad because of the nature of environmental crisis which is a steady worsening of living conditions. He examines the roots of the environmental crisis, strategies for change, and priorities favored by citizens and government.

9. Daniel Zwerdling. "Poverty and Pollution." In The Progressive. Jan. 1973. Pp. 25-29.

Zwerdling states that environmentalists are not coming to grips with the government or the public with long-range issues like economic growth. Zwerdling asserts that any assault on the problems any group faces must be a combined assault, because of the common foe. Environmentalists must realign their part of the struggle, or find themselves discovering that the environmental movement is isolated, according to Zwerdling.

IV. Environmental Issues and Economics

1. Hazel Henderson. "Ecologists versus Economists." In Harvard Business Review. Jul./Aug. 1973. Pp. 28-36, 152-157.

This article is a review of a group of books that discuss the implications of the ecology-economics controversy for businessmen and for the economy as a whole.

2. Lester Thurow. "Toward a Definition of Economic Justice." In Public Interest, Spring 1973. Pp. 56-80.

Thurow explores several modes of defining economic justice, problems and alternatives. Issues of "satiated needs" and "superabundance" as means of attaining redistribution and social justice are analyzed. Alternatives are suggested as means of attaining a just distribution of goods and services.

V. Energy

1. Murray Bookchin. "The 'Energy Crisis'--Myth and Reality; An Interview with Murray Bookchin." In Win, vol. 9, no. 39, Dec. 1973.

Bookchin suggests that we must be aware of the real alternatives to nuclear power and understand other equally disastrous technologies. Bookchin feels we should mobilize around these social, technological and communal alternatives and help make people aware of what could exist in contrast to what exists today. This is a good interview, hitting the key points of the reality of the energy shortage, the problems of over-consumption and over-production.

2. Arnold Miller. "The Energy Crisis as a Coal Miner Sees It." In The Center Magazine. Nov/Dec. 1973.

Miller, president of the United Mine Workers of America, discusses the energy crisis in light of the undemocratic nature and special interest constituency of industry. He points up the interrelatedness of oil, gas, and coal companies as energy companies; and of industry, the economy, government, the environment, energy consumption and output.

3. Daniel Zwerdling. "Florida Fight: Ecology vs. Jobs." In The Washington Post. Jan. 20, 1974.

Zwerdling discusses plans by Tenneco and Westinghouse to build a \$250 million factory to assemble floating nuclear reactors in light of the local situation. He exposes maneuvering to make the main clash between civil rights and environmental groups over jobs instead of allowing the clash to be between local people and the corporations.

VI. Cities

1. Alan A. Altshuler. "Interpretation; Transit Subsidies: By Whom, For Whom?" In AIP Journal. March 1969.

The use of transit subsidies as new alternatives for the poor and non-driving public. Altshuler comments that the increase of the automobile has caused a decline in the mobility of the non-driving public.

2. Virginia Brodine. "A Special Burden." In Environment, vol. 13, no. 2. March 1971. Pp. 22-24, 29-33.

Brodine presents a study by Dr. Bertram Carnow testing air pollution levels as determinants of death. Carnow found that air pollution does significantly affect the death rate, and that exposure to pollution is by no means equitable. Those areas populated mainly by non-whites and all low socioeconomic groups were the areas of highest pollution levels.

Interview Questions:

1. Overall, what reactions do you have to the working paper on the relation of environmental issues and social justice issues?
2. From the perspective of the advocacy of social justice, what is (are) the environmental problem(s)?
 - a. Personally, how important is social justice in understanding environmental issues and working on environmental problems? How does the value of social justice affect your understanding and behavior toward the problem of pollution? Of population?
 - b. For you what other values besides social justice are fundamental in understanding and working on environmental problems?
 - c. From the perspective of deep commitment to social justice, which environmental issues are most important and why? Which least important and why?
 - d. From the perspective of deep commitment to social justice, which are the important aspects or effects of any environmental issue?
3. Should environmental education be an integration of an ecological-biological perspective and a societal perspective (social, political, and economic)? If so, why?
 - a. If such an integration is desired, should the ecological or societal perspective be primary? Why?
 - b. What problems have you experienced or do you foresee in trying to achieve such an integration?
4. What should be the place of social justice as a value in environmental education?
 - a. What rationale would you offer for emphasizing or not emphasizing social justice in environmental education?
 - b. How should social justice be defined for use in environmental education?

- c. How much emphasis should be placed on this value compared to other values in environmental education? (e.g. scientific objectivity, thorough problem solving, human survival, respect for the natural environment, etc.)
- 5. In diagnosing environmental problems, how should environmental education deal with multiple and conflicting basic values and ideologies?
 - a. Given an emphasis on social justice in environmental education, how would the topic of land use or transportation be approached and developed?
 - b. Given other value bases of diagnosis (e.g. systemic overview, rational problem solving, etc.) how might the issues of land use or transportation be approached and developed?
 - c. Should partisanship of diagnosis be stressed in environmental education? Why or why not?
 - d. Should a primary emphasis on social justice in diagnosis and change be offered as one among many alternative perspectives on environmental problems? Why or why not?
- 6. How does the diagnosis of an environmental problem affect the choice of strategies for understanding and solving the problem?
 - a. Given commitment to social justice as the primary diagnostic value on energy problems, what strategies of problem solution or social change would likely be pursued? What strategies would not be pursued?
 - b. Does commitment to social justice in relation to environmental problems lead to certain problem solving-change strategies? If so, which ones?
 - c. Should environmental education include theoretical and practical change strategies which are important for achieving social justice?

Interview Participants:

Rod Allen
Bill Bryan
Jim Crowfoot
Ethel Hackney
Ruth Hepburn
Laurie Lamson
David Sutton

- D. Sutton: I don't think that the paper was at all clear. There are several different views of social justice cited but there is no explicit definition of the term given in the paper. A definition is crucial - it goes back to things as basic as what you believe to be the nature of man. Is man innately good or innately bad? Is he egotistical and self-seeking and if so, are there any social constrictions to intervene so that one man's exercise of his freedom doesn't infringe on that of another? If so, it would be unjust not to have restrictions. Of course that doesn't apply if we believe that man is innately good - any social intervention at all hinders his freedom in realizing his full potential. What is your basic assumption? It is absolutely essential to a definition of social justice. We know we are not going to come to a consensus, but it is important to be explicit in our view of what man is when we start talking about what is just for him.
- R. Hepburn: I am rather resistant to your language. [The use of the word "man" as opposed to person is being referred to here]
- D. Sutton: Defining social justice is essential to its consideration in the environmental education program.
- R. Hepburn: I really react sort of negatively to that in the sense that I would really hate to see us all lost in verbiage. I really feel that if we try to start talking about the nature of humanity we would be lost in that.

R. Allen: You really are going to have to define that because what you are going to suggest later is based on a particular view. The question comes up for me immediately as a public school educator, do I have the right to impose any particular view?

R. Hepburn: If we are going to talk about that we are going to have to talk about the nature of education too.

R. Allen: You have to talk about the nature of public education briefly but not to spend hours dealing with various philosophies. The teacher has to be very careful in the kinds of assumptions he or she is imposing upon the students in the class. That will be one of the problems of environmental advocacy in public schools--it depends on who is doing the advocating. It is not the teacher's function to do that, in my judgment. It is the student's function to do that because as soon as the teacher starts advocating for his or her students to accept that position, it is no longer education. We can all sit here and agree that it is wonderful for people to advocate environmental causes. Once you have established that principle then you have my "friends" in Florida and north Georgia who are advocating racism and sexism and so forth. You would not buy that position. I think it's good to look at the principles underlying the recommendations we are making. If you don't have environment defined how can you get environmental education defined? The word is used many times but what is meant by "environment" and "environmental education" and how does that get to questions of social justice? They are basic considerations that we have to deal with.

R. Hepburn: I think that what you are saying that a teacher is, that's a big lie. I think that what that's saying is that teachers are more subtle manipulators than other people and I don't believe that. One thing that I always explain to students,

I always quote Angela Davis, who said one time that the job of a professor was to profess and that's really true - professors do that all the time, whether they structure it in a rational mode or not. That's what they do when they are professing and that profession can be a very creative and organizing force. You know that it is the rational model that perpetuates the status quo.

D. Sutton: You don't think that teachers have the responsibility to espouse views other than their own?

R. Hepburn: Sure, I would agree.

R. Allen: Education, in its Latin root, means to bring forth for reflection and then for personal evaluation and commitment. The public school educator acts, whether you like it or not, as an arm of the state and the kids are forced to be there. In social studies, for example, probably 98% of the students in this country taking social studies courses are forced to be there by one law or another. That imposes very special and very sensitive restrictions on what that teacher can do. Now for that teacher to be an adult model of an advocate of a cause--fine. For the teacher to take positions, as long as those positions are open to analysis and reflection, fine. But to set up a course where the educational objectives are designed to promote a particular set of values or a particular view of the world is simply not education.

R. Hepburn: But you do that - that's what I am saying. You do that anyway. If you set up a model that says you are going to incorporate all these points of view, you have already set up a model of values and priorities.

J. Crowfoot: Let's see if we can move around and pick up one or two reactions from others of you to the working paper. So far we have identified the key issue of the function of education which to me was raised by the working paper. We have talked about advocacy of values, the importance of getting at some underlying assumptions which are not explicit. What are some other kinds of comments and reactions?

E. Hackney:

Well, first of all, as an overall reaction to the paper in general, I found it interesting in some respects but in other respects. I found it vague. Some of these definitions left me wondering at times what the writers were getting at. But as to the questions and the issues, I guess I have a lot of special bias because if you start talking about redistributing resources, then maybe the people who are the have-nots consider that just, while on the other hand the people who have the haves consider that unjust. We have to get into the question of how effective that was - was it your fault or was it forced upon you? This again would color the way you feel about it and then you get into the thing of what is equal access? If I put something out there and tell everyone to run and get it and you are a cripple, then you don't have equal access. So, by the time I get into all this I find that I am as confused as I was before I started. I take a point that seems logical to me but after I examine it, it seems totally illogical. To go further, there are some families who have thousands of acres of land who got this land through no particular efforts of their own but when the Indians were driven off their families laid claim to it. That doesn't mean that you worked any harder to be the heir to a thousand acres of land than he worked to have nothing. What real right do you have? On the other hand, you might look at someone who was born and grew up at the same time you did and he decided he did not want to stay in school or have a decent job. You look at it - why did she get hers while I got nothing. Then you start to look at it - was the structure as relevant to her needs as it was to mine?

J. Crowfoot:

What should environmental education be saying, if anything, about the person who has a large land holding that's been inherited through several generations, back to the Morgans or someone with a railroading background?

- R. Hepburn: There's no way of looking at that phenomenon without looking at the larger structure. That's a way of looking at what Ethel was looking at too - looking at sources of exploitation for people as well as the environment. People are part of the environment.
- R. Allen: I think that in terms of teaching strategy what you do is to present the situation as you describe it, maybe in a specific case rather than in a general case of land ownership, and have students analyze various positions and look at the reasons that are used to justify particular practices. Find out why the individuals holding those views feel they have good reasons, and how those principles are warranted - like why own land, why be honest, why be just. Let the students deal with their reasons for personal position on a particular issue, and get them to reflect on why those reasons are good reasons.
- R. Hackney: I think you would find that all of the land-owners would have good reasons. Then you get into a lot of talk which is superficial
- D. Sutton: I think we have to guard against advocating only our own view. Self-righteousness is believing that you have the Truth with a capital T. The way to guard against this is to incorporate as many views as we can.
- R. Hepburn: Don't you care what your students think when they come out of your classes?
- D. Sutton: Sure, but I wouldn't presume to make them think what I thought. What I would like to do is to present every view that I could possible find on the issue and I would not balk at giving them by bias. I would clearly tell them exactly what I thought and why. They could end up making up their own mind, being cognizant of all the conditions and all the manipulations. I would like not to be part of that manipulation. I would like to say these are all the influences on you - which one do you want to reject? Which view do you want to accept and why?

- R. Hepburn: My education was told to me. All through my education they told me that was what they were saying.
- J. Crowfoot: Let's take the premise of the very limited time and energy in the classroom or intellectual setting for inquiry. Like the issue of land use - what would be the important perspectives? What would be different points of view that you would want the students exposed to?
- D. Sutton: I always start with stating my bias. Most problems of land use evolved out of man's thought that he could own it. I believe that society as a whole should own the land, not people per se. Then I would talk about the problems of private land ownership and how it came about, socially and politically. I would talk about the different views of man towards the land - what is it? Is it a commodity? Or is it part of a system that is a part of us and of which we are a part?
- J. Crowfoot: That gives us a feel for how you think. How do others feel?
- B. Bryan: I would recognize myself as an advocate. I have a hard time believing that teachers are not advocates. I would try to figure out what was the most effective way to put across my point of view. I think I would start off with the issue of owning land - how ownership is presently or popularly viewed, whether you own land you are holding in trust for generations yet unborn or whether there should be essentially no ownership of land. I would then begin documenting various specific cases of abuses of land, why land ownership is a very important source of power, how that really screws up the whole situation and affects the whole issue of across the board decision-making. That's how I would go about it.
- J. Crowfoot: How do others see it?

- R. Allen: I think that the thing that is personally so offensive to me among environmental educators is their perception of a right to indoctrinate the hell out of students, especially in public institutions.
- R. Hepburn: That's what public institutions are all about.
- R. Allen: I would concede that that is precisely what American history courses have been doing-- to tell a myth structure--to socialize kids. I'm saying that's not what ought to be. Just because that is what a social institution does doesn't mean that is what it has to do or what I have to do within that social institution.
- R. Hepburn: But if you are doing something really different within that social institution, why wouldn't you be doing what Bill is talking about? If you are talking about educating children differently from the way 99% of their other school experience has taught them, one thing you would be talking about would be advocating. You are advocating, indoctrinating or manipulating, or whatever the words are, when you bring a rational approach into it and say all these things are equal.
- R. Allen: I'm not saying they are equal. I'm saying that on this particular issue in this community, there is a spectrum of positions. Let's look at that spectrum of positions to see how people justify their positions and the world-view assumptions that these are based upon. Let's see if they are consistent with the positions that people are putting forth and if, indeed, you think that people ought to have consistent positions on land use matters, The students would know that I have a position on this particular issue, and if they are interested, I'll tell them my position and they can test it for consistency and ask the appropriate questions if they want. But it is essentially up to those students to come to a position in that class. Otherwise every teacher runs off with the particular axe he has to grind or tries to indoctrinate kids in his or her particular way.

E. Hackney: But you are indoctrinating all the time whether you call yourself an indoctrinator or not. You have just been indoctrinating then.

R. Bryan: Let's make an analogy to sports. We are in a ball game and there are certain rules. Unfortunately, those rules I didn't help to create. Those rules are not a rational, empirical approach to decision making. The only way for me to change that around is to win that ball game, but we are prevented with those kinds of rules. At least, that's how I see it. We are in a position of manipulation and of really changing rules around. That's why it really is important in this meeting to talk about where your head is. I really have problems with people who don't think they are in a position of being a manipulator. If you are an educator, you are particularly in a position of being one. Therefore, it is very important that we know what we are manipulating. It comes down to who are you accountable to? Those are the key issues of environmental education. What kind of philosophy, ideology are you accountable to? I am scared that the only person you are accountable to is yourself. Nice people finish last, unfortunately.

R. Allen: That's what Vincent Lombardi used to tell us. I personally don't want to use his world-view system to educate kids.

R. Hepburn: You are really trying to negate his argument with the sports argument.

R. Allen: Obviously in education people are manipulated and that can be a very good thing in terms of being exposed to issues and learning skills. I would say the empirical justification, the research we have, would indicate your position is not that successful for learning self-internalized values.

E. Hackney: You are going to have to manipulate to some degree. We have been socializing ever since

we have been on this earth and society has come up with certain sets of rules that have been found to be workable. You can't negate all of them. Suppose in our society there are things that I say are a no-no. Is it wrong to inculcate into a child this? There are some basic values that you can't get around, unless you plan to go out to an island and become a hermit and not come into contact with anyone. As long as we live near anyone we are going to have to follow some values. I'm not saying that we have to swallow everything but there are some basic rules.

R. Hepburn:

You don't simply advocate by speaking about it. We were talking this morning about wearing clothes, driving a car or whatever. In my classes, part of the way I do that is in terms of group work. Part of the way I do that is being the way I want them to be, and I am required to be open. If we can't come to any kind of statement of values as individuals, then what are we doing here? I feel that we have been convened to talk mostly about social justice.

R. Allen:

Essentially what you are saying is that the power structure can indoctrinate students. But when we can get into the schools, we are going to indoctrinate twice as hard to counteract the establishment. You can't build a just society based on that kind of operation

J. Crowfoot:

Let me try to explicitly relate this to social justice. It seems to me that one way we conceptualize these frameworks is different political ideologies. Different ideologies have some very different perspectives on the different distribution of wealth, power and resources. What should environmental education be doing with those different ideological frameworks and different definitions of justice?

D. Sutton:

Expose them.

R. Allen: It has to be more than just exposing. We have to analyze the different consequences of holding these different ideologies or world views or whatever. The basic rub, it seems to me, for most environmental issues is that you have a political system and a set of social beliefs that are based upon a "justice" which is distributive (each person gets his or her due somehow), whereas most environmentalists argue from a common-good ethic. There are two ethical traditions, as to what is fair and appropriate, one coming out of Rousseau and the other coming out of John Locke. It is very hard to handle the distributive ethic in terms of practical political matters in a no-growth situation. With the common-good argument, we do not use how the individual fares, but how the society as a whole fares, as the test of what is good and appropriate. There are those different ideologies but basically you have the common-good test or the individual test.

J. Crowfoot: Let me see if I understand what you are saying. Dave said expose and you say we have to go beyond expose and look at consequences and look at it in various categories - distributive versus the common good. Here you are moving toward the implication that given the potential needs to limit growth, we really have to have the students doing some kind of critical comparison between where the distributive ethic and the common-good ethic are going to lead.

R. Hepburn: Do we have any kind of a base here? Such as where we can say that exploitation is bad?

R. Allen: It depends on what they are.

R. Hepburn: Racism and sexism also.

R. Allen: Yes. I have to deal with those terms in concrete applications. I look and say that motherhood is good, racism is bad and sexism is bad and look at them in concrete

terms, rather than as names for values. I have a real problem with that. It is the same with the terms of social justice and common good - we use them in conversation but what do they mean?

- R. Hepburn: That's true also with the concept of exploitation.
- R. Allen: You have to look and see what exploitation is in a concrete situation.
- D. Sutton: Given the examples of exploitation that you gave, I would say it was bad. Sexism and racism are bad, but what do we mean by exploitation? I can see examples of species "exploiting" the environment but it may not be necessarily bad.
- J. Crowfoot: Let me summarize. It seems to me that if we have any kind of consensus, it goes something like this - issues of distribution are essential to be examined in society, certainly essential for environmental education to be concerned about. It seems to me that if there is any sort of base line here that is where it is. With that kind of base line and given other values in environmental education - e.g., respect for the environment, scientific objectivity - what kind of priority or consideration if any should be given to this distribution? And why should a person concerned with environmental issues give priority to that particular value?
- D. Sutton: When you approach environmental education, consideration of these issues is inescapable. You just could not get into investigation of the social and environmental impact without talking about distribution.
- J. Crowfoot: And talking about distribution we are talking about a value-centric consideration. What other kinds of value-centric considerations do we feel are important?
- B. Bryan: Values concerning relationships with people are very important for us to be talking about and I see some direct implication for social justice. I'm talking about our particular contacts, race types, sex types. These are absolutely paramount in anything

that we are doing in environmental ed. In my background and formal training, it never was an issue but now I see it is the most fundamental issue. When I think of social justice, that is one thing that I have to address.

J. Crowfoot: I hear you say you want to address the quality of a relationship - class, race, sex groups - and that is really fundamental. That would be in addition to the question of how goods are distributed.

B. Bryan: Yes.

R. Allen: What we are saying is that environmental educators, like other educators in society, from adult to early childhood, have to be concerned with the issues that are confronting society as well as issues which are particularly attuned to their bailiwick like social justice, distribution of production, the environment, and that sort of thing. So you can't ignore racism, sexism, the war in Vietnam, etc. Am I right in summarizing how I hear what you are saying?

J. Crowfoot: I think that you are saying more than that. These are core issues.

B. Bryan: Yes, those are core issues and that's how I look at them

R. Allen: One of the key concerns I have is: Can individuals build their views of the world, self-images, commitments, and live out those commitments in a life style that could go in all different directions from the main thrust of society? In other words, there is a great pluralism in the way people want to live and the values and beliefs that support that different life style. Will the need to cope with environmental problems for the common good impinge upon these life styles adversely? What is

the relationship between individual freedom and pluralism as we would like to have that, ideally and not the way it is usually dealt with in society? That is the kind of interplay that is critical for students. It reminds me of a film, I think it was called "The River" with Montgomery Clift and Lee Remick, where Clift comes in as the big TVA agency - save the region and control this river for the common good. His big problem is with this old woman who lives in the middle of the river, and to try to get her to sacrifice her old roots and her life style for the common good. That is the kind of problem we are into today - two ethical perspectives, one emphasizing the common good and one the individual self. That is a corollary to issues of social justice. Like racism and sexism - not different from social justice but a different dimension of the same thing.

B. Bryan: I would very much support a social diversity.

R. Hepburn: One thing we have to talk about is how realistic we are. One thing I am struck by is how we idealists are so much more practical. School is indoctrination - that is one thing that is real, and another thing that is real is that we individuals don't exist without the context of the social structure. You said how can we establish individual life styles without the context of society? You can't - it doesn't happen. You can talk about restructuring society to accommodate social diversity but you can't talk about these individuals existing without the strictures of society. We have to talk about what is real, too
[The discussion then turned to teaching methods, structure and openness in the classroom, and their effects on students of different ages.]

B. Bryan: While we are talking about skill training, I feel that I need certain skills. I require skills more of social technology, but I have

some problems of wanting to share that with anybody - the problem of people asking for information or wanting you to share the skills and my not wanting to give it to them until I know where their head is, where their values are. I'm not locked into the school system thing but into a specific ideology and I am not going to prostitute that. Do you as teachers offer skills to anyone that comes along?

- E. Hackney: That sets you up as a judge and I don't think you have a right to judge everybody.
- R. Allen: You've already made part of that judgment by refusing to work in a public school system.
- R. Hepburn: That's about the only place where we can choose the method by which we can disseminate the skills.
- J. Crowfoot: It seems to me that Bill sees skills as a method of redressing injustice. It seems to me a crucial question. Other folks would see reading and writing as skills to redress society as well. The key question then is to ask who are you accountable to and to what ends are your skills being employed?
- R. Bryan: Who am I accountable to? I hear what you are saying is that I am going to have to be accountable to myself. I don't want to be a dictator. That is what we are fighting - a lot of people who are accountable to no one.
- E. Hackney: You can control it. Suppose you were a karate instructor. He came for recreation, he came for self-defense and I came because I want to be a street mugger. How are you going to sift through our motives and decide who to admit to the school? How are you going to decide what our motives are?
- L. Lamson: The kinds of things I feel I am fighting are taken as the norm. Just by talking to someone I can tell what sort of thing I am coming

up against. It is a sort of sifting process for me personally - I am not in a position of director of a school but whatever skills I have I am not going to share with people who are going to do me in later.

R. Allen:

You picked a really good example to raise the question because with the skill of karate, you have a head training as well as a body training - they go hand in hand. It is not just simply teaching a skill. Training takes place over a long period of time and the instructor can cut a person off at any time. At the university I am called upon to help people write proposals. I refuse to help some people do it, when they want to rip off an agency of the government, foundation or whatever.

R. Hepburn:

Doesn't all of this point out the absolute centrality of establishing value criteria, if you are going to talk about what your constituency is or how you are going to judge the skills or whatever? How do you have those value criteria? The thing that affronts me most of all is that we can make all these reforms within this structure, yet the structure of a capitalistic, patriarchal society is consumption and growth. That is the structure. How can we exist environmentally with that kind of a structure? How can we talk about anything on structure, how can we avoid values and avoid establishing what our priorities are? And how can we exist within the status quo structure - how can we make that a tenable position?

J. Crowfoot:

It seems to me that one of the fundamental issues being struggled with is the way in which one defines the legitimacy and problems of the system we are in now as a context for secondary, tertiary values, around objectivity and so on. I hear Ruth saying that the structure we have now is basically and generically incompatible with certain key human and environmental values that she has, and therefore what

needs to be done is the organizing around an alternate set of values that will come to challenge the legitimacy of the current structure and eventually topple it. I hear Rod saying that the current structure has within it the capacity of reform and therefore has a valid legitimacy towards authority, and that one works within some limits and within certain definitions in certain institutional settings and uses those settings to help people get informed and to become a part of making the structure more responsive. I hear a very different underlying analysis of the context within which we are working, how it operates and how it needs to be changed.

R. Hepburn: I need to ask Ethel something too. How did you respond to that, if we in some kind of theoretical ideal could establish a value structure? Would that be consistent with what skills we should teach? How would you react to that?

E. Hackney: If we decide on a set of values?

R. Hepburn: Yes.

E. Hackney: I teach skills to everybody. If we decide on a set of values that we all want to live by - this is theoretical - then we have to give the student the skills that would allow him to survive. But going a step further, I have severe problems with some of these alternate life styles that have become popular because I think they are a cop-out. We see examples of people who say we want to live here and form our own community and we are not going to be extravagant, we are going to turn to nature and to our environment, blah, blah. As soon as they get sick they come right back into this corrupt society and want to go into this hospital that all these corrupt people with their materialism have built. Or they want some doctor to come down and operate a free clinic. My objection is not for them opting out on those values if they want, but don't have it both ways.

- R. Hepburn: Isn't it compatible to have some of those advantages of the society?
- E. Hackney: But not to reject the society itself and say we don't want to have anything to do with it and we don't want to support it. I don't think so.
- R. Hepburn: But you can have those alternative values.
- E. Hackney: No. If I withdraw from this and do nothing to support it then I don't think that in time of need I should come back and use it.
- R. Hepburn: What we are talking about too is defining what we mean by productivity. How society has traditionally defined productivity has been pretty unsuccessful.
- J. Crowfoot: Say we have a young person who has a college education, a creative person who moves to the countryside to form a collective and tries to structure an alternative life style, to be in touch with the environment and also with human values in that social structure. This is as opposed to working at a first-level professional salary, working in a school system that is desperately in need of creative teaching resources, but is a real grind of a school system. Say you have that kind of situation - there is that kind of choice. I hear Ethel saying that a person moving out into that kind of setting, taking with them everything that society has given them is a heavy drain and of real concern when one is talking about helping certain populations in society to survive. It raises some very fundamental issues and I hear her questioning whether that is legitimate. You're talking about how do we assess the productivity of that individual in those two settings?
- R. Hepburn: You make a real phenomenal assumption, Jim, which is that those educated persons are going to go back and help these people survive. That is not what happens to educated people - most of the time what they do is become middle-class people and then upper-class people and they don't help anybody who is lower-class to survive.

- E. Hackney: I reject that idea that if you become middle-class or upper-class you aren't helping someone survive. I don't think that helping people survive means touching this person or that person. Everyone can't touch all the same people.
- B. Bryan: I really hear what you are saying and I guess that I am very frustrated at times seeing people doing all these kinds of researches that Jim was talking about and then going out and doing their own thing and completely isolating themselves, except for what they can take out of that existing structure. I feel - and this probably dictates my value prejudices - that those people should really be involved in fundamental structural change in society instead of doing their temporary thing with resources, which I question are really being utilized effectively. On the other hand, and we have this nearby, we have America Two where they are trying to develop a completely different life style which I think from a people point of view is a lot more humane and certainly a lot more ecological as well, and I think that this experiment is very necessary. We are going to have to develop different life styles and the only way we are going to be able to do that is to do very different kinds of things. Yet I wonder if that is just a kind of rationalization for them doing their own thing, and very selfishly. I am very confused obviously by my own response and I am only putting that out because I want to share my confusion.
- R. Allen: Is it important to your thinking that the people who are going out and following this communal style see their effort as being subsidized by the larger social order? Given the capital that is invested in education, what society is doing is subsidizing an alternative. That may be a very worthwhile thing but it is important that the people who are doing that see that they have been subsidized by the society. It is not a self-sufficient operation.

- B. Bryan: That's OK but that is not the main concern for me. I would like to see those people doing something that will fundamentally change that society.
- R. Hepburn: Laurie was just reacting to the idea of society subsidizing alternate life styles.
- L. Lamson: First of all, I really don't buy that idea. Basically, I just feel that society is not subsidizing these people trying to change what is going on. Just as Ruth said that women are not going to be given power, they are going to have to take power. In that same sense, I don't feel that any social activist is going to be given a new society - it's going to have to be something that is going to have to be worked for.
- R. Allen: I don't argue with that but I am just picking up on Ethel's point about the person who was trained through the Ph.D. or M.A. or through mastership in tool and die making, and decides that he doesn't want to be a tool and die maker but go and live on a commune. Isn't that a subsidy?
- R. Hepburn: No. Doesn't society have some obligation? Don't we have to define what contribution is? People who are not ripping off the environment - that's a contribution, and shouldn't they also get their health care taken care of? That could be a very important redefinition of productivity.
- R. Allen: Look at the cost though
- R. Hepburn: I am really tripped up every time by the notion of what contributions are. For instance one of the things here is that people can eliminate my position as an historian and say that she is not contributing to anyone so she can go out and live on a commune. So I feel eminently expendable. But say we have these people who are scientists and we need these people to help keep our little technocracy going. We can have all these people become technocrats and measure their contribution. But isn't

someone investigating an alternate life style also making a contribution and why shouldn't that society help subsidize them, in health care, transportation or any other kind of form? It's another question of values, of what we see our society doing. That's the structure we have. The ideology of revolution is going to be fought out within the existing dominant life styles. Why isn't that a contribution?

- E. Hackney: It may or may not be a contribution. I think that some people who have adopted the alternative life style are
- R. Hepburn: Are cop outs.
- E. Hackney: Yes.
- R. Hepburn: Capitalists have copped out too because they are only using it to serve their own selfish means.
- E. Hackney: We are all basically capitalists. You are working for money so you are a capitalist too
- R. Allen: We have explored some of the issues of social justice and alternative life styles. But what about the life style that is an alternative imposed upon people of poor backgrounds, or disadvantaged in terms of social justice and the environment? The black or white rural farmer and his family, for example.
- E. Hackney: You have a point there. Every time I go into the grocery store and want to complain about the prices, I think of the farmer who is barely subsisting. I don't mean the corporate farmer but the single-family farmer struggling for the bare necessities of life, whose income is below the poverty level. When these prices go down, here is this guy who can't even buy his kids a pair of shoes. So it really poses a dilemma on where you stand.
- L. Lamson: It really points out who makes the decisions.

- E. Hackney: For the migrant laborer who really works under horrible conditions.
- L. Lamson: The conditions for them and the decisions are made for them by a small elite group who are interested only in profit.
- J. Crowfoot: Should environmental education be teaching about worker capitalism, distribution of political power in this society?
- R. Hepburn: Yes.
- R. Allen: That's why I have been checking the paper prepared for this session. The paper says that the third notion of social justice can be stated in terms of consciousness raising. That is more idealistic than the other. But I think it is more practical because the consciousness-raising mode seems to be the mode that is beginning to work. That kind of awareness of what's going on is appropriate for public schools.
- R. Hepburn: How do you have the consciousness raising without this value structure? Where are you going to raise this consciousness to?
- R. Allen: That's for the individual to decide but to study various perspectives and various judgments of others - that's consciousness raising, being aware that there are alternatives that people are talking about, that there are different views. What you need is a variety of views

Comment by Jim Crowfoot:

A key underlying theme of the discussion was the legitimacy of advocating social justice, particularly within institutions of public education. Within the group there were deeply held differences on this matter. Much of the process of the discussion represented attempts by different individuals to articulate and defend their position on the role of social justice in environmental education. Periods of intense polarization alternated with periods of exploration and inquiry.

A distinction between what the participants actually did and how they conceptualized what they did permeated the discussion. It appeared to the interviewer that there was more agreement as to what individual participants were actually doing in relating social justice to environmental issues than there was with regard to the participants' conceptualizations of what they were doing.

Another theme that greatly affected the process of the discussion (as well as the content) was the participants' sensitivity to instances of racism and sexism in language and in the pattern of participation. The group included both blacks and whites, and both women and men. A good deal of the early conversation related to "red flag" phrases and dominance patterns around race and sex.

I believe this discussion demonstrated with a good deal of clarity and depth important underlying differences

within environmental education and the environmental movement on how to deal with social justice. Of course, this is not a mere technical question but also an issue of fundamental commitment.

The Constituency of Environmentalism

By Linda Harrison in consultation with project staff

Apart from a few artists and writers before Knowles's* generation [people] regarded the wild as something alien and hostile. Their energies were largely directed to conquering wilderness and destroying savages in the name of progress, religion and indeed survival. The pioneers and their chroniclers frequently employed a military metaphor in discussing the advance of civilization: wild country was an enemy which had to be vanquished and subdued by a pioneer army. Achievement was defined as winning the battle against the wild. Nash (1966)

During pioneer days the environment was perceived as the enemy to be conquered and subdued. Yet increased technology and attitudes that support conspicuous consumption and planned obsolescence stimulated a series of conservation groups to support and protect animal and plant life. These groups because of their professional tradition have represented those who could afford wilderness luxury, national and state parks. Neuhaus (1971) supported this when he stated that: "Conservationism has been historically and remains an upper-class anxiety. The very rich fret about their gaming or the preservation of their estates. The moderately rich fight for their leisure in the wilderness, and on down to the middle-income vacationer's fear about the overcrowding of the trailer camps" Conservationists

*On the morning of August 10, 1923, the Boston Post stated that Knowles plunged into the Maine woods naked to live alone for two months.

saw themselves representing basically two constituencies: 1) species of animals and plants, and 2) middle and upper-class elites who could afford wilderness experiences. Conservation educators protected such experience by directing their efforts toward helping individuals to understand the characteristics, risks, distribution and problems associated with natural resources, plants, animals, soils, water, etc. Early leaders in the conservation education movement were largely associated with and worked through universities and state and national agencies.

Allegiance to nature and elite constituencies surfaces some serious and conflicting problems: 1) the confiscation of land from Mexican-Americans in northern New Mexico to increase national park boundaries left local citizenry without adequate land to graze their cattle. Survival to these local citizens meant war with the park service, and 2) Hardin (1973)* wants birth control methods tied to financial aid to Native Americans for population control. Native Americans are endangered as much as any animal or plant species and need to increase their numbers for survival of the generations.

These goals and practices are closely related to classical Darwinism which threatens the very existence of the third world; the above activities encourage depletion

*Hardin, G. spoke at an earth ethics conference at Bowling Green University in 1973 when he presented this idea.

of the species rather than survival of the species. Classical Darwinism has been a part of our heritage as evidenced by conquering nature and the native American, by enslaving the black and subjugating the Mexican-American, the youth, the women and the aged to the whims of the elites. Many ecological issues and accompanying strategies for change represent the resurgence of classical Darwinism promulgated by white cultural arrogance.

The elite will make small concessions when possible to maintain conspicuous consumption, high energy use, selected land use principles and to pacify the oppressed. This, of course, insures the elites maintaining their power and privilege. Conservationists cannot save the rich, themselves or animal and plant species because the elite at best support a false protection. Such protection conflicts with our organization of capital, labor and production, i.e., planned obsolescence is not only destructive to people but drains our natural resources, threatens the survival of plant and animal kingdoms and our spaceship earth.

Some EE programs to date have attempted to deal with the urban bio-physical surroundings in terms of such topics as pollution, water quality, consumerism, land use, housing, energy and transportation. Basic causes of inner city and urban blight have not been integrated effectively into a

conceptual whole by environmentalists (including EE programs) working in urban areas. Often third world peoples' response to environmentalists is that of apathy and scorn: environmental slogans become antics to divert interest away from such underpinnings as racism, ageism and urban ills. Although environmental education has begun to integrate the natural and biological sciences with social science, it continues to emphasize traditional environmental foci of wilderness preservation. Currently within EE there are attempts to broaden the definition of environmental education to include both traditional conservation interests and social justice concerns in both rural and urban areas. An example of such an attempt is a statement by William Stapp that: "It is not enough, for example, that professionals learn how to reduce automobile exhaust emissions. Ordinary people, young and old, must be able to reach the professionals to tell them what changes in car design and cost are tolerable. They must have access to political leaders as well, to influence automobile legislation and regulation and to break whatever alliances that exist between industry and government against the public. They must be able to build citizen coalitions with enough power to confront, challenge and change decisions...non-professionals are needed to preserve the biophysical environment, they are even more essential to improve the human environment. Unless ordinary people become involved

in these issues and achieve the technical knowledge and political skills necessary to make their involvement count the urban environment can only continue to degrade (Sandman, 1973). When EE perceives the ordinary citizen as its constituency, it is several steps beyond the traditional conservationist. Yet to perceive the ordinary citizen as a constituency confuses rather than clarifies the underlying values, goals and interests of EE. The lack of clarity and specifics concerning which groups of "ordinary citizens" leave the impression that this is an undifferentiated group. By implication work with any part of this group is acceptable and desirable

EE's constituency should be those that are most oppressed: the landless, the low energy users, the polluted, the crowded, the aged, the young, the third world and the poor. EE should be acting together in concert, in unshakeable solidarity for improved social and environmental conditions. Similarly its goals should be to liberate and not domesticate. To domesticate is to acquiesce to present institutional arrangements and present modes of relating and present modes of production. Yet to liberate is to embark upon new and creative life-styles supportive of values that protect and cherish the ecosystem, that engage the oppressed in problem solving and political activities that are humanizing and liberating and self-affirming. To liberate the oppressed changes the relationship between the

oppressed and oppressor, it changes the relationship between people and nature: both the oppressed and plant and animal species are exploited by the same forces (Freire, 1970).

Yet one could clearly ask: How does one effectively represent the oppressed when in fact they have little political clout!? This is problematic: it takes courage, energy and time to build a power base for decision-makers to respond in the partisan interest of the most oppressed. EE has to start with concepts that have political meaning within the context of the experience of the oppressed building to greater and more comprehensiveness, involving and actively engaging the oppressed in decision-making along every step of the process. It involves understanding class elitism, racism and sexism and working on ways and on issues that move toward a society in which these oppressions are not present. If EE takes value-centric positions that are at variance with its constituency such value centricities should be open and made public.

EE's continued reliance on a traditionally-formed educational system will cause it to lose touch with constituency groups or fail to gain credence with other groups through its present mode of education. Schools are presently passive in nature, hierarchical, authoritarian, make students dependent and create and support the maintenance of technology that is responsible for uninhabitable surroundings. We will have to

change traditional schools to make them more responsive to social and environmental issues or we will have to de-school society and use technology differently to bring people messages about our devastated environment and the sources of that devastation. Yet we do not mean de-schooling in the same sense as Illich, (1971). He clearly wants to complete deschooling; we want a partial deschooling through alternative school structures and through creative use of technology that would be available to alternative schools and broader society.

Counter-culture efforts as well as alternative schools have already been involved in the deschooling process as evidenced by its flexible curriculum which often involves students' problem-solving and often political activities around environmental issues. They are actively engaged in community by doing and learning from community teachers and often participating in strategies for improved social and environmental conditions. Moreover, the learning process should be reciprocal. Mead, 1970, supports this when she stated that the culture is moving into a phase where the young and the old will be teaching each other and where the young will increasingly be teaching adults. McLuhan, 1964, hints at deschooling when he stated that college students learn more outside the classroom and to be in school interrupts their education. Further, we need advocate teachers and advocate community organizers acting together with the

most oppressed; we need access to multiple forms of alternative media such as community and underground newspapers, commercial and cable T.V.'s, etc., to reach the masses of the most oppressed and to use such as a vehicle for group and coalition building.

Some of the alternative cultures, for instance, have decided not to depend upon formal education and are willing to invest time and energy in self-learning and organizing to enhance their visions and strategies for a new society. Such movements continue to gain credibility; they have opted out of the mainstream and have chosen a life of subsistence, and a life close to nature and land. They are not apart of the mainstream conspicuous consumption, yet increasingly possess the technology and professional skills to survive in their counter cultural life style. These groups are involved in various kinds of communal living and are practicing new relations and new values. Some have organized themselves into political as well as counter cultural groups in order to aid and support change that is consistent with their new found life. Others are involved with themselves but have a healthy respect for the environment.

It is interesting to note that such movement did not come about as a result of an environmental education movement per se, but from dissatisfaction from consciousness

II (Reich, 1971). Although the counter-culture movement seems viable as a constituency group, it is not! Most whites involved are middle-class people who are alienated and disillusioned with society. This group, however, has a choice they can exercise any time; they can return to the mainstream--the oppressed cannot! Yet, such counter-cultural groups could be one element in a vital coalition involving the oppressed as its major element.

We must not confuse constituency with coalition. These concepts are different. EE along with the most oppressed will have to build coalitions with other upper and middle-class organizations on multiple issues to support and enhance the cause of liberation between the have's and have not's, and between people and nature. It should not make coalitions with movements, for often movements run counter to special interests of the oppressed, but we should make coalitions with groups around special interests within movements. It has to be flexible, evidenced by the half-completed journey that went from civil rights to Viet Nam peace movements to women's liberation to ecology, to energy, not to be engulfed and defanged by such multiple movements.

Coalition building should be based upon horizontal accountability and not trust. Coalitions built upon trust and asymmetrical power relations leave less powerful groups

vulnerable to further oppression and suspicion toward coalition partners. Yet coalitions built upon conditions of equal and mutually-shared power acting in concert will move toward achieving stated goals and objectives. Groups acting separately are often unsuccessful in moving toward desired ends. The oppressed must find ways of making others accountable on specific issues as well as broad-based issues. As such this will take trained EE and a well-informed constituency to diagnose needs and goals of single and multiple interest groups working toward social and environmental change.

As long as environmental educators perceive their constituency differently from the most oppressed they will participate in false coalitions that will continue to oppress the downtrodden, and will continue to exploit both animal and plant species with remnants of classical Darwinism.

Key Questions

1. What is the role of traditional schools as opposed to alternative schools in environmental education?
2. What is the role of the middle and upper-class in the liberation of the most oppressed? How is this tied to environmental education and to our survival on spaceship earth? How is it not tied to our survival?
3. How can environmentalists avoid elitism and be responsible and accountable to their constituency?

4. Can environmental educators be responsible to all living things or to all people or to all people relegated by their societies to substandard environments? To what extent are the above constituencies compatible?
5. What is the role of the environmental educator in building an environmental constituency? Is it ethical for them to influence people and manipulate those whom they feel should be aware of environmental issues? Is it ethical for them to influence and manipulate changes in the life-styles of people?
6. To what extent is deschooling society (as Illich talks about it) a way for training an effective environmental citizen?
7. To what extent should environmental educators deal with the dissemination of information on corporate power and the organization of capital, labor and production as contradictory to the environmental movement?

Annotated Bibliography

1. Freire, P. Pedagogy of the Oppressed. New York, Herder and Herder, 1970.

This book is on the justification of a pedagogy of the oppressed and methods for teaching the poor to overcome their oppression. It stresses education for problem-solving and liberation. Education from liberation consists of increased consciousness by using words and symbols within the environment that have political meaning. Freire had done much of his work in South American countries with the poor. Many of the concepts apply to the oppressed living in industrial nations of the world.

2. Illich, I. Deschooling Society. New York, Harrow Books, 1971.

In his book Illich advocates and builds a case for deschooling the educational establishment since they promulgate the evils of society. He feels that schools are inhuman, hierarchically-controlled and monopolized by educators. He feels that learning could be more exciting and relevant if done within the context of society rather than schools.

3. Gartner, A., Greer, C., and Riessman, F. (eds) After Deschooling, What?

This book consists of a collection of articles including one by Illich. Articles are a critique of Illich's Deschooling Society. Both positive and negative views are presented.

4. Mead, M. Culture and Commitment: A Study of the Generation Gap. New York, Natural History Press, 1970.

In this book Margaret Mead talks about the generation gap and how the culture is moving toward changes in the relationships between adults and youth. She states that the society is moving from the era of adults teaching youth to youth teaching adults. She also explains where some of these phenomena are coming about.

5. McLuhan, M. Understanding Media: The Extensions of Man. New York, Signet, 1964.

McLuhan feels that technology has determined how man and woman think, behave and live their lives. He feels that mass media are responsible for decentralizing modern living and have brought people closer together as though the world was a small village. He states the implosive nature of technology causes both confusion and frustration as well as ideas and excitement.

6. Nash, R. The American Environment: Readings in the History of Conservation. Mass., Addison-Wesley, 19 .

This book consists of a series of essays that give an overview of the history of the conservation movement. The text approaches the subject in four phases: 1) conservation impulse, 2) progressive conservation crusade, 3) conservation between the war, and 4) conservation as a quality of life. Some of the more outstanding essays were written by Thoreau, Olmsted, Pinchot, Roosevelt, Cash, Carson and Udall.

7. Neuhaus, R. In Defense of People. New York, McMillan, 1971.

Neuhaus feels that the ecology movement diverts our energies from the political tasks of liberation from oppression. He feels that the movement is an easy rallying point for multiple groups with multiple

interests that short-circuit activist behavior, leaving those in power untouched. He feels that the movement is a myth with underpinnings of classical Darwinism that is potentially destructive rather than constructive.

8. Reich, C. The Greening of America. New York, Random House, 1971.

This book is about a non-Marxist revolution. It is a revolution against overwhelming technology and values that come with such technology. He states that individuals in society are going through various states of consciousness, moving them toward humanistic values and life-styles.

9. Sandman, P. et al. The Environmentally Effective Citizen: curricula in environmental education at the University of Michigan. Ann Arbor, School of Natural Resources, 1973.

This is a brochure written by the staff on the environmental education program in the School of Natural Resources at the University of Michigan. It describes the direction of the program as well as the course requirements and prerequisites.

Interview Questions:

1. In general, what reactions do you have regarding the working paper on the constituency of environmentalism? What were some of the strengths and weaknesses of this paper?
2. Should environmentalists be responsible and accountable to all living things, to plant and animal species other than humans, or to all people relegated by their societies to substandard environments? To what extent are the above constituencies compatible?
3. What do you feel is your actual constituency? What do you feel is your ideal constituency? If the actual and ideal are not the same, how do you make them the same?
4. What difficulties do you see in relating to your constituency? In what way is your behavior not consistent with your constituency? Should it be? If yes, what are some of the driving forces that support behavioral change that are consistent with your constituency? What are some of the driving forces that do not support behavioral change that are consistent with your constituency?
5. What is the role of the environmentalist in building an environmental constituency? Is it ethical for you to influence and manipulate changes in the life-styles of people?
6. How can you avoid elitism and be responsible and accountable to your constituency?
7. What are the major problems and dilemmas given the constituency as being white and middle-class. To what extent is constituency important for environmental education?
8. To what extent should environmentalists disseminate to their constituency information on corporate power and on the organization of capital, labor and production as contradictory to the environmental movement?
9. Who in this room do you feel can offer clarity with respect to constituency and direction of environmentalism? Why?

Interview participants:

Bunyan Bryant
Joe Chadbourne
Chuck Roth
Michele Russell
Bob Vogl
Doris Welcher
Elaine Wong

- B. Bryant: Who are environmentalists responsible to? Who is the constituency? Is it to all living things, plants, animals, human beings, oppressed? That goes around and around. I'd like to throw it out to this group.
- B. Vogl: Your constituency in a very practical sense is who's there now. If you divorce yourself from those who support it, you are losing the base of support. How you extend and expand that to bring in different positions is another kind of question. What concerned me in the paper was it was almost saying to divorce ourselves from that basic support. I would see a greater need for more coalition building.
- E. Wong: Our basic support being white middle class.
- B. Vogl: Yes and upper class, wherever they are, whoever they are. My own experience suggests that the constituency is falling off, even in those groups.
- C. Roth: This is the responsibility of many of the group, especially those of us who happen to be in professional organizations, for internal education to broaden the understanding of those who are giving us the support. We face this all the time at the [Audubon] Society. Our membership comes strongly from the white, middle class. That's where the money is that supports our activities. If you alienate them, you may have met your moral obligation but you're down with oppressed classes now, because you don't have anything. How do you do it? Part of it is to build people's value levels so they realize this is what they're doing. Sometimes they do things for all the wrong reasons. You get

the finances to go and do things, and you get land to preserve it from their point of view, but for you to use it from your point of view. The motivation may cause some ethical conflict, but it depends on how you use it. I think gradually in many of these situations, whether it's a university or what, it's a case of helping people to broaden their perception of what their responsibility is to equality, social justice, whatever, so that you don't lose your basic support, but get them to be giving more support to be doing these things. Make them feel that their financial support is at least one way they can express themselves, in moving into these other areas. It's a very tricky type of thing. You're playing both sides against the middle -- it's sort of pragmatic politics in a way. But it's very hard not to do. We have many board meetings where we have to hammer people, and it's very interesting to watch the changes in our board members. They're going and doing some of the education process, but they're not being very socially responsible. This is a different kind of constituency than most people think about.

- J. Chadbourne: Would it be correct for me to think that what you're saying is that people who are most likely to contribute to an environmental service system are the most likely ones to be afraid of having what they possess taken away from them?
- C. Roth: No. I don't believe that. They live in a world which has boundaries prescribed by living, and a friend of mine on our staff described it as the suburban cocoon. Some of it is overt, there's no question about it, but a lot of it is ignorance
- M. Russell: When I look at question 2, which is an odd question, I have to begin answering it by saying okay, what is an ecosystem, what has caused the imbalance internationally to those

ecosystems? When I do that, I identify an international system of economic organization, and just as in systems terms the international capitalist development of the U.S. and Western Europe has produced underdevelopment among three-fourths of the world population, so we can see in microcosm in various communities the same dynamics at work. In addition to that, there's the compatibility of the interest groups who are without power and varying degrees of influence. I would characterize the people you work with as those having more influence and no power at the level I'm talking about. When we talk about the compatibility as some sort of alignment across the range of those constituencies and groups, we have to be clear from the beginning about our own objectives. That is, of course, if it's possible to do anything. Here the value clarification rests not so much on the various constituencies you work with, but on ourselves. It is important for us to keep in mind the apparent contradictions between some of the most economically privileged sectors of the population who are interested in environmental issues, and those of us from, (sloppily defined,) the oppressed communities. I mean that not in a cultural sense but in a sense of the way in which victimized communities of economically privileged folks, whether they live in suburban cocoons or whatever, have had to organize their lives to convince themselves that they're really free, so as to aid the powers of consumption of those elites that I identified earlier. They have to do it at the level of conspicuous consumption because they don't have the means of production. I think that's one of the contradictions that we're trying to bring in balance when we talk about how to build coalitions, what issues to give priority to, what tactical approaches to take, to reorient the individual's attitude toward the environment.

- E. Wong: People have been talking around this. Was the question one of do we direct ourselves to what we call the oppressed class, or some sort of international community, or some sort of idealistic man in harmony with animals and plants? I can't understand this from the way it was phrased. How specific do you want us to be?
- B. Bryant: It relates to something else I said last night. That is that there are different ways of getting at the issue of change. I talked to some people who are environmentalists and they are advocates for nature and plants and animals. They are saying we have to stop change or we're just going to be destroyed. They see themselves really aligned with nature. I think probably more recently there's another group that's saying hey, we've got to deal with ourselves first, in order to have a value base from which we can go to the environment, because the same forces that are exploiting plant and animal species are exploiting men and women so maybe we should get ourselves together first. Some of the concepts some people are talking about relate to Freire, who wrote the Pedagogy of the Oppressed. He feels the constituency group is the oppressed, and it is up to the oppressed to save both themselves and the oppressors
- C. Roth: The constituency is all life. Man may be only one species who tends to step out and look at himself, yes he's a unique species. Every species is unique, that's what makes it a species. They have characteristics that make an identifiable species. But you have to deal with the whole framework and this is where you get what's good for birds is good for people along a certain

balance. When you talk about the constituency sometimes when you look at it from a sociological point of view and are looking at it from an oppressed point of view, you get uptight because you're looking at specifics instead of saying what is good for the species as a whole. To a certain extent we try to do that, and one of the things that distinguishes environmental ed from conservation and so forth is a recognition that the man and the city are natural.

B. Bryant:

The reason that oppression is utmost on my mind is that I just finished working with some Cheyennes. The reason I feel the Cheyennes, as well as other Native Americans, are in the position they are in now is because they had a poor immigration policy. It really gets me upset when I hear environmentalists talking about saving the endangered species, such as the songbird. But at the same time they never look at Native Americans as being an endangered species. Native Americans should in fact increase their numbers if they're going to survive. On the one hand we have people, say, running out to nature and I hear people saying trees have rights. People are talking about saving endangered species like the songbird. At the same time they are not consistent in applying the terms to human beings. I'm coming down on the side that the constituency has to be the most oppressed because those are the ones who will keep you honest.

C. Roth:

I would turn it around inside this way. I will still defend the rights of endangered species. I will accept that there are minority groups, just as there are people coming down on the side of the sub-species let alone the species, you know, we should keep these races of animals. But it's like the wealth problem. Part of the answer is that it's the toughest problem going; it's hard to get some people to develop social justice concepts, to give up where they are and distribute it. This means distribute

genes the same way we distribute dollars. What I'm saying is that each of the sub-groups is a gene pool and what you've in essence said is that the Native American gene pool should not be allowed to become extinct, should be allowed to expand itself to a larger percent of the

B. Vogl:

What you are saying then is that American Indians have a right to reproduce at a faster rate than existing populations within the United States, especially white populations. Should they also reproduce faster than other minorities such as Blacks and Puerto Ricans? In other words, how far back does one go historically, and what groups are included in developing an appropriate baseline from which to pass judgment on what constitutes the proper proportion of American Indians for today's society? Implied in this approach is that the only avenue for dealing with the concerns of minority populations is to increase their proportionate numbers because the political system will not deal with them equitably as minority populations.

C. Roth:

Just as we have to redistribute wealth, Americans, as you were saying, have been using a very disproportionate part of the world's resources. The white European took over a disproportionate amount of the gene pool on the continent. How do you play this game? Rather than saying we should just expand the numbers of human beings at the expense of other species--that's not logically so because every species' role, almost its reason for existence, is to perpetuate itself. To try and pursue this is biologically natural, except to the point where as humans we have removed the controls that function in most other populations, so that the only control we have left of ourselves is ourselves. When we push other species off the planet we are threatening ourselves. The other species have rights, true, perhaps, but there's also the human survival aspect; in losing that part of the system we are also endangering ourselves.

- M. Russell: I think it is possible to level the discussion to issues of species and gene pools, etc. It strikes me that the people who are most comfortable with that, and for whom that is normal habit, are most prone to deal with the issue of perpetuating endangered species in a model which is kind of what I call the zoo mentality. You know, two of a kind. Just as there are bird sanctuaries, so there are reservations for Native Americans, so there are various sections of the globe for the currently powerless.
- C. Roth: One critique to that is that sanctuaries don't work for birds or animals any more than reservations work for people, but most people don't recognize that.
- B. Vogl: My other concern about using this sort of analogy is that when we talk about endangered plants or animals, at least in animal populations, you can get down to some fairly definitive numbers. If you get below a certain level, there's not going to be enough to reproduce and that population or bird is going to disappear. But I don't know how you come around to the point of saying the American Indian is an endangered species. Is the gene pool disappearing?
- M. Russell: That's the problem with biological arguments.
- B. Vogl: The next step, by looking at it as an endangered species, you're sort of laying a burden on them to reproduce and what does that cost socially? Is the Indian family that wants few or no children a target of abuse within the group for not reproducing to meet the goals of the political leadership? Do large families just perpetuate the cycle of poverty that many American Indians are trapped in?
- B. Bryant: You're doing it. You wiped out the country. You have not always been the majority in this country, but you are now. White people must have really got a lot of stuff together

because you have really populated this land. At the same time the population of the Native American has gone down, while yours has been increased. I'm afraid that the Northern Cheyenne and Crow may become extinct, particularly since the onslaught of the energy conflict. The eastern energy companies are moving west and it's the classic conflict between eastern energy companies and ranchers and cowboys. In order to build coal gasification plants they're going to rip off the water from the Cheyennes and Crows. That's getting down to a point of survival and the point is their population has not increased, but decreased. That's the issue. And if you want to take it to Nazi Germany, that was real and the same thing happened. In fact it has happened here. The Indians were decimated and it can happen again. That's one constituency.

- C. Roth: But you have to look at that group by group. Because the Navahos are doing the reverse, they are increasing in population. They are regaining and probably surpass their original population.
- B. Vogl: I'm bothered by that separatism.
- B. Bryant: That's as American as apple pie.
- B. Vogl: Everybody is being dumped on. Ranchers are losing out, white people are taking it on the chin, too. They're not alone in that battle.
- B. Bryant: John Redding owns a ranch out there, and his land went from \$50 an acre to \$500 an acre. By the time he sells his land, he can get about \$5 million and he can move.
- B. Vogl: That's John Redding or whoever, but I'm sure there are some others who don't have it who are white.
- B. Bryant: Cowboys get ripped off

J. Chadbourne: The notion from which we operate, though I wouldn't have said it in these words before today, is that we function from the viewpoint that the most oppressed people in the world are the kids in school today. This has been pretty well documented. It's a pretty large population, and any influence with students has short and long-term impact. Therefore, the constituency we're concerned with is those kids.

M. Russell: Can you say something about the element you identify with to make that statement true?

J. Chadbourne: In terms of power, the ultimate source of power is knowledge, and the oppression or restriction of knowledge begins in schools.

M. Russell: You think the source of power is knowledge?

J. Chadbourne: This implies how to use it, how to gain it, knowledge about other people.

E. Wong: I don't think it really matters if we in this room decide who is the most oppressed in the world. I'd like to finish this up. Were people in agreement with what Chuck said? I can be in agreement with what Chuck says in a sense. To me my own activism has sprung in different areas. I learned about seeing myself as a woman, an Asian woman, now I've tacked on environmentalist; I've always been interested in environmental things, although it was never my issue. I've opened myself to that and I see how I always move back to the same causes, which are economic. When I talk to people I generally have to put it into an economic base. When we talk about anything like busting highway trust funds, you eventually talk about monopolies and corporations. At least our organization does. I also have always been one of the special privileged elite people who get to go off hiking and camping and I enjoy that. I feel

the sensitivity as an environmentalist of feeling we have to be in harmony with the ecosystem and all plant life, land and water and air resources. I've been into birds or animals, too.

- C. Roth: I wouldn't think there is an inconsistency there. Because I don't think all environmentalists have to be interested in plants or animals. I think it gets at Colberg's concern, that the only morality is justice. That's the thing you are looking at. My departure from Colberg means equal opportunity for people. And equal opportunity for all living things. When I define oppressed it means no access to justice. Therefore, I look at a broader constituency than just people.
- B. Bryant: Man living in harmony with the universe -- is that the starting point or end point?
- All: End point.
- B. Bryant: How do you get to that end point? The question is getting back to the constituency. Does one start out representing all things, which becomes very messy, or do we talk about representing some things in terms of a strategy to bring about the ultimate?
- C. Roth: It's a case of road mapping. You know what town you want to get to, then it's a case of what highways do you take. Which ones will get you there more rapidly or efficiently than others? Unless you know your destination it's hard to know what highways to take. This is where we're really at.
- B. Bryant: Can environmentalists understand that there are some social justice people who are very concerned about representing and working with the oppressed?
- M. Russell: I'm sure. Let's assume we all agree on the end point, some things we've all shared in common, about problems in our current situations. Your model is that effective change

can come from above. My model is the kind of change that we're talking about can only come from below.

C. Roth: I can't quite agree with you. I can't accept that it's an either/or situation. Change comes through the system. I don't think there's any one point of intercession that works to the exclusion of others. The only way change occurs is through multiple points of the system.

B. Vogl: Taking on from Chuck's point, that's what concerned me about the paper. You get too preoccupied with identifying specific groups or issues, so there's a fractionalizing of efforts. It's important for Bunyan to call attention to these groups or needs. But to say the other parts interested are the enemy, I thought that was pretty heavy, to hit the white middle-class elitism over and over

(The discussion turned to different environmental attitudes among whites, especially Northern European versus Mediterranean ethnic backgrounds.)

E. Wong: Let's talk about specific populations in the U.S., like Third World populations. I assume from what I studied that Native Americans have considerable consciousness about working with nature and some feeling for it. But I know the Asian American constituency that I've worked with very slightly doesn't have any intuitive feeling, in the context of the U.S. Since we're talking about the constituency of the environmentalists, do we feel that we should aim at any certain racial groups? Is that worthwhile? I'm interested in other people's thoughts.

C. Roth: I was just going to comment on Asian perceptions, because one of the perceptions we've been raising is the Japanese viewpoint. When

I went to school and we studied cultural anthropology, we were taught to think the Japanese had this great nature viewpoint. Then you look at Japan and what it is, and you ask how. When you go back and look at their nature perception you find it one of totally human control. I think it's the ability they have to control that has allowed them to organize into the industrial nation they have.

E. Wong: One thing that you said though, about vanishing species -- I studied cultural anthropology in school. I worry too about vanishing cultural life styles not only in the U.S., but in Japan and other Third World underdeveloped countries.

B. Vogl: A significant number of people seem to be willing to trade what they've got for that thing called jobs and profits.

E. Wong: Let's talk about who we have to address ourselves to. When the paper said we have to look at our constituencies as the most oppressed people, what does that mean concretely?

M. Russell: For me the issue is not so much oppression as it is exploitation. One aspect is oppression. Obviously there are a whole range of white people in this country who are exploited to such an extent that it makes only a rhetorical difference to talk about them as being privileged. One of the reasons I asked the question, how do we begin to deal with constituency in the workplace instead of just an undifferentiated mass in a neighborhood or community, is because I think it's in the workplace that folks' self-interest becomes clearest. Also the necessity for action and thoughtful organizing become most well felt. When I think of building coalitions that have some long-lasting value, which really identify in the long run the widest cross-section of people that will ultimately be interested in returning the world to some sort of ecological balance, I think of people who have to sell

themselves in order to survive economically. That puts them in a slightly privileged position. If they have to simply sell themselves in ways which result in standing in an ADC line, that is obviously a more severe range of oppressive conditions. All those people are constituents. The practical organizing problem for me is -- I begin to think in terms of class rather than oppression. Then we have to develop programmatic ways to grapple with regional, rural, urban situations. The urban situations, in particular, you find the most underdeveloped in terms of environmentalists

(The discussion turned to the difference between lower-class and middle-class activism, then to student environmental activism and the constituency problems this raises for teachers.)

C. Roth:

There's something to be said for looking at yourself as a constituency of one. I don't mean this in a self-profiteering basis, but somewhere along the line you deal with issues like this, come to conferences like this, come to conclusion of where the world ought to go and these are your beliefs. As you live your life you try to influence others towards these beliefs, which is what politics really are. You are building a constituency out of a set of beliefs and are trying to get others who share this. I heard a lot of us saying who are the people out there we want to join? Suppose I were to come to a conclusion and say this is what I believe, and be willing to gather around all those who believe in this commonality of beliefs, and hope that it has a diversity without going the other way.

M. Russell:

I guess I agree. As soon as we individuals think about a constituency as something totally other than us, we are bound to make mistakes and be manipulated. I agree with that. There has to be a basic self-interest which is to be socially based.

Beyond that I think we can be a lot more deliberate than we have been about doing more than hoping that the diversity is there, and the diversity is contradictory. We have to be very realistic about why there is even a conference like this, why the government is paying us. All these things go on in a political context, and where is the money that is now being put into environmental education coming from? It came from someplace. One of the areas it obviously came from is War on Poverty funds. They're not there anymore, they're in environmental education.

- C. Roth: From a coalition point of view there are many places that groups like this can work together on issues we agree upon, but be mortal enemies in other areas. Agree to disagree but still work together, without saying if you don't encompass my whole body then you're not my constituency. [General agreement.]
- J. Chadbourne: The constituent who wants to and can respond is the one whose needs you're addressing. For a guy without a job, that's it. For people who have a job and property and kids in school, maybe it's the school that's the issue. It's very important for us to make sure that we address those needs that we feel most deeply about.
- B. Vogl: But if you only address those needs, then you run the risk of
- J. Chadbourne: I didn't say that. But you're not going to get awareness until you begin to deal with those kinds of things first. It's my needs first.
- B. Vogl: You need an emphasis on self-interest perhaps, of self-needs of the individual, but I hate to see it stopped there. And just say you have to spend the next few years on that level.
- J. Chadbourne: You'll find that replaced by a new need as soon as that's settled

- B. Bryant: Can we just brainstorm around some stuff? Who do we represent? Who is our constituency?
- B. Vogl: Diverse. On some issues there's going to be agreement and on some issues there's not.
- E. Wong: Michele had one of the best statements about our approach to constituents. Our object is to put our environmental issues in ways that will sensitize people to the broader issues of social justice. Not who we represent, but who we address ourselves to.
- C. Roth: I think it's important, the difference she's making, because one says we're politicians and that assumes we have been elected, and the other says we are addressing ourselves to issues around which people will cluster.
- B. Bryant: That's the issue. On the one hand we're saying the constituency is diverse and we're all in agreement with that. The other is who do we address? That's really like being a politician. Is that what you're saying?
- C. Roth: A politician is somebody who a lot of people cluster around and he represents them and he is responsible to them.
- M. Russell: There's no strict accountability lines for people who define themselves as environmentalists. The issues they think are important and the groups of people they mobilize to accomplish a very limited objective -- there are no definitive lines of accountability at this point. We may decide we want to work for that as a goal.
- C. Roth: I still go back to my viewpoint that we represent all life and that environmentalists raise issues and collect people to support or fight them on these issues. That's really what our constituency is. Those who rally to the issues

Comment by Bunyan Bryant:

This was a group discussion more than an interview. An underlying dynamic of power and control was evident throughout the discussion. In part this was probably a result of the resistance to conference structure that started the previous evening, but it also concerned leadership within the group--two powerful third world women played major leadership roles and were in conflict with two white males on many issues.

The group as a whole tended to disagree with the pre-conference paper on the nature of the constituency of environmentalism. Several people believed that the constituency should be all living things, and argued in support of this that what is good for birds is also good for people. Even those who concentrated on people did not for the most part believe in splitting out oppressed people as their constituency. The emphasis was that nature and all people are exploited, and thus nature and all people are the constituency of environmentalism. However, some stress was put on the workplace environment and on the fear that a constituency of the oppressed would cut environmentalism off from its basic support system, the white middle class.

The group never discussed issues of elitism because it could not get past the question of constituency repre-

sentation. The conversation was good and seemed to help people deal with a basic question that will continually resurface in environmental education.

The Support System for Environmental Education

By Carol Rothman in consultation with project staff

Eledonia Einstein has just arrived in Megalopolis, U.S. this week. She received her M.Sc. in Environmental Education in June, and is now in the process of trying to establish herself in town as an environmental educator. Obviously she must build alliances and constituencies, but where?

As she sees it, she has numerous options available to her as potential directions to reach out for support. Some "cost" more than others, some help more than others, some are consistent with each other and some are not. She is carefully involved in weighing the benefits and trade-offs involved with alternative directions before deciding where to start building her bonds.

Should she hole up in her apartment and start churning out grant proposals aimed at the federal or state government? Should she apply for a consulting or teaching position in the local school system? Should she consult fellow professional environmental educators about what they are doing and how they can help her? Should she build alliances with students, parents, industry, environmental groups, active community members or what?

Ms. Einstein can't go it alone, but she also can't please everyone. Where should she pick her allies? Also, from whom does she want to be independent - from government, industry, environmentalists, the community, other environmental educators?

Financial Support

Prospects for any real impact for environmental education are inextricably linked to issues of funding. Thus, financial support is an obvious critical issue of support to be discussed. As with other forms of support, funding calls for some responsibility to the supporter, and thus, some influence over future directions of the environmental education movement. Environmental education gets some financial support from all segments of society. These range from the United Nations and federal governmental agencies to industry, foundations, labor, down through local private and quasi-governmental agencies, environmental groups and private citizens. Where does, could, and should the financial burden for environmental education rest? What does this mean for the priorities and future directions of the movement?

The bulk of visible financial support for environmental education now rests with the federal government. Is strong national leadership and centralization a trend to be encouraged or discouraged? Many environmental educators do

believe that the federal level is where the major responsibility for leadership should rest. Rep. John Brademas (D. Ind.) is a representative of this point of view (see Environmental Education Reports - April, 1973). Brademas, who has been responsible for introducing environmental education legislation into Congress, believes that environmental education is a national need, as environmental problems transcend state boundaries. He has come out strongly against giving the major responsibility of environmental education to state and local governments. Clay Schoenfield, of the University of Wisconsin Environmental Communication Center, has also stressed the need for national central program coordination and coherent integrative philosophy as the key to survival (see Schoenfield).

Walter Bogan, director of the U.S. Division of Technology and Environmental Education, has a somewhat different stated perspective on the federal role for environmental education. He speaks of federal monies basically as seed monies, with the major purpose of the environmental education act, P.L. 91-516, that of getting things done (see Env. Ed. Reports, March, 1973). He has stated that he hopes that projects which were funded at the federal level initially will generate enough interest that they will be picked up on the regional, state and local levels for

future funding. Bogan suggests a push for local school district and local foundation support. One suggestion is for a national foundation to make a grant for a prototype project followed by local foundation support a year or two later in several local communities. The sentiments of William Stapp of the University of Michigan's Environmental Education Department, are similar to those of Bogan. Stapp believes that major financial support is both necessary and desirable at the national level, until regional, state and local leadership comes forward.

There is a near consensus among environmental educators that individual states must come up with commitments to match the national commitment to environmental education. Many states have developed, or are in the process of producing a state plan for environmental education. Several of these plans, such as those of Wisconsin, Michigan and Minnesota, have been developed through a broad-based effort to include input from as many different constituencies of environmental education as possible in the planning process.

Such planning allows each state to receive federal funds for environmental education in addition to calling attention to the need for state funding. Unfortunately, real state support has not as yet been committed to environmental education as a result of these plans, although they have done something to draw in federal money. The environmental education act was responsible for providing major

portions of the funding for the development of these plans.

Currently, there is a high correlation between discontinuance of federal funding and concomittant stoppage of local and state programs. Should such funding be so heavily relied upon for the impetus and implementation of programs? Proposals aimed at gaining federal or state funding are often slanted to meet national or state priorities, rather than responding to specific local needs and objectives. Can a better local support system for local environmental efforts be developed? If local taxes paid for environmental education, might responsiveness to local constituencies be better?

Opponents of large centralized financial support argue that in the degree to which there is a large flow of money from above, it is unlikely that community-based constituencies will get further involved in environmental problem solving. Professionals and institutions are certainly more likely to push for control of visible federal monies. Timing can also play an important role with regard to local organizing efforts--perhaps more local organizing should be done before large amounts of government money become available. If it comes too soon, it is likely that large amounts will go to the older, institutional structure, with the de facto control that expertise and authority give to access to money. Bureaucratic procedures involved with

getting federal monies are often overwhelming to many who want and deserve to participate, as the mechanics of application often do require technical expertise and expensive support services. Is decentralization a possible way to go to overcome such blocks to broad-based participation?

Practically speaking for the 70's, there is now very little money available to meet the growing need of environmental education for financial assistance. Much of the little money that is available is at the federal level, and local systems are currently unwilling or unable to budget for environmental education without a push from federal and state level monies. One direction which needs further exploration is the feasibility of arriving at inexpensive environmental education projects, capable of being supported on a local shoestring budget. Extensive financial resources cannot be relied upon as the major support system for environmental education, or the movement risks collapse in times of withdrawn support. Often creative use of human resources can more than make up for a shortage of grant monies, and thus such resources must be developed in order not to become overly dependent on a single source of support.

School System Support

Many environmental educators function within an hierarchial school system in which environmental education

is not a major component. This system - including colleagues in other disciplines, principals and other administrators--constitutes a potential support system for environmental education. The assets of looking to the local school system for support are obvious--funding, administrative cooperation, utilization of disciplinary instructors in environmental education, etc. The disadvantages--dependence on a support system that is not committed to environmental education--are equally clear.

Professional Support

A non-financial support based of growing importance is the increasing professionalization of the field of environmental education. Many aspects of this increased professionalism have developed within the last decade. These include the emergence of a specialized environmental education literature, with journals specific to the field; professional associations; the development of graduate university programs in the field, which lead to growing numbers of trained environmental education specialists; and the planning and holding of conferences specifically focused on environmental education in an attempt to conceptualize the basic tenets of the profession.

The desirability of the professionalization of the field has until this time been taken much for granted.

Many believe that if the field is to become prevalent, gain clout, and endure over time, it must become professionalized. However, given the rapid professionalization of the field, a major emerging issue in environmental education is the need for a careful examination of both the powerful benefits to be derived from professionalism, and the potential dangers which must be avoided in this new-found support system.

A key function of professionalism is the legitimizing purpose that it serves. Hand in hand with the legitimacy accorded to a profession comes greater financial support, access to university resources, and the power that is given to an acknowledged authority. The professional holds an important niche (role specialization) in our society. The knowledge of the field is assigned to a discrete group of individuals who are then assumed to have the expertise and skills needed to diagnose societal needs with regard to their specialization, and prescribe solutions. They are given the power to exert quality controls over the use of this knowledge.

Numerous other benefits can be derived from the professionalization of a field. The adoption and diffusion of innovations is facilitated by the legitimizing authority accorded to professionals. Professional training produces a strong identification with other professionals and thus, a ~~reference~~ group to turn to for support and information

exchange. Horizontal professional accountability can optimally provide freedom from vertical influence by higher authorities in an organization, such as school administrators in a system which has employed an environmental education professional consultant. Another benefit accorded by this freedom is that often sources of financial aid will ask fewer questions about use of monies granted to a professional.

Unfortunately, the independence accorded to professionals frees them not only from accountability to administrators and bureaucrats, but also from clients. In the case of environmental education in schools, this includes students and the community at large who often suffer severely from environmental problems. Environmental educators must become aware of the potential trade-offs involved with this professional autonomy. From whom do environmental educators want to be independent?

Environmental education has evolved as a field from roots in conservation and outdoor education to include a focus on such issues as land use, housing, transportation, energy, and planning. This broadening of concern has allowed the field a potential to become responsive to a much more diverse range of constituencies, including potential involvement of more lower class peoples, minorities and women who had little access to the middle class white-male field as it was formerly constituted.

If environmental education is to make a real difference in community problem solving, it must make links with the broad community at large. As the field becomes increasingly solidified and potentially narrowed into the norms of a profession, the probability of this link occurring is sharply reduced. The delegation of responsibility involved in role specialization can often result in routinization and rationalization over time. The environmental educator must remain wary of such potential dangers, in order to become truly effective in helping the society make the changes necessary for the solution of environmental problems.

In developed professions outside participation is seen as both unnecessary and undesirable, as the profession insists that it can be trusted to best meet the needs of its clients. Yet normative pressure is put on professionals to adapt to institutional structures and bureaucratic arrangements rather than to be open to change. The development of innovations challenging to the status quo is at times suppressed in such a move towards conservatism. The group pressures set up within the ranks of a profession make it a serious risk for a professional to challenge current norms and risk hostile criticism from peers. The participation of non-professional people in environmental education is thus critical in order to keep the profession accountable to the people who bear the brunt of environmental problems.

Non-Professional Support Groups

Inherent in the philosophy of environmental education is the recognition that it cannot depend on government, schools and environmental professionals alone for the broad-based support needed to achieve community environmental problem solving. Non-professional support is considered to be of extreme importance for numerous reasons, such as to ensure that programs won't get cut by money sources or administrators; to protect against the dangers of professionalism, to maintain relevance; to involve the community in skill development; to ensure a broad-based participation; etc. There are also some problems inherent in non-professional support groups which also must be recognized. These include the problem that many people who feel powerless in this society may be politically or fiscally cautious about involvement; the potential of different interest groups to fight each other and destroy a program or alienate other sources of support; or the problem that many community people who could be involved might reflect values which are themselves sources of environmental and community problems.

Despite recognition of such costs to remain aware of, environmental educators generally agree that students, parents, environmentalists and community groups of all sorts

must be involved along with such powerful groups as government, industry and professionals in giving input into the decisions made in the field. Environmental education needs to develop sound mechanisms for gaining the support of such non-professional constituencies. Should the support of non-professionals involve only token input, or is the field ready and willing to undertake a search for means of helping non-professionals achieve real power in the decision making process?

Students

There is general agreement that students have much to contribute to the support of environmental education in the schools. Environmental educators agree that students should be encouraged to investigate their environment in a problem-solving context. However, most schools today tend to consider students as incomplete citizens whose learning is best confined to the classroom, not the community. Students have been taught that they are incapable of regulating their own behaviors in terms of self-reliance and self-motivation in taking responsibility for their education. Thus, a major problem to be solved in looking to students for support of environmental education is to overcome their training for passivity.

How can students gain skills necessary for them to deal effectively with adults? How can teachers and students work in coalition in environmental issues? Many students do not want decision-making power, as they wouldn't know what to do with it if they had it. Often, students do have a feeling of participation in decision-making processes, when in fact control is basically maintained by program leaders, teachers and administrators. Can systems of environmental education be designed in which power is truly shared equally between adults and students?

Parents and Community

The need for parental and community support of environmental education becomes critical as schools become decentralized. Lower class and third world parents are becoming increasingly sensitized to the inadequacy of traditional schools to educate their children. Parents want their children to be taught the skills they need to earn a decent living and to participate in the socio-political life of the community. Can environmental education be developed to meet these pressing needs with community help?

Certainly parental involvement can often help make educational programs more appropriate to the needs of the community. Where involved, parents can act as liaisons to other members of the community from the schools. Such involvement can yield increased resources for school activities

and thus increase community independence from the knowledge and special training of the professional. It certainly must be recognized, however, that at times parental involvement can be an extremely conservative force, which might run counter to the goals of environmental educators. When the parents reflect community values which directly contribute to environmental problems, it is not only the students who need to learn the connections between those values and community problems--such a situation expands the role of the environmental educator beyond that of only working with students.

In most cases, initiation of innovation appears to come from outside the formal educational setting. Some of the most important initiation of such innovation could potentially come from environmental and citizen groups in any community, as well as from parents and industry. The inhabitants of the system are naturally much more preoccupied with the successful operation of existing educational programs. Thus environmental educators need the support and input of the community at large (see Miles).

Mechanisms for Non-professional Support

Several environmental educators have developed models which allow for some student and community input into the educational process in public school systems. The program

developed by Chadbourne in New Hampshire and Cleveland (see Chadbourne) is designed to allow the teacher to "run with" the existing interests of her or his students. Students are given the opportunity, with teacher guidance, to state environmental concerns, pursue environmentally related activities in their community and to work with anyone the student feels to be a potentially useful resource toward the solution of the issue being studied. Sparrow, in Michigan, is developing a program through which the students plan an important role in environmental education curriculum development. The environmental education programs developed by Stapp, as exemplified by the Toledo Public Schools environmental education program (see Haney), allow for student and community input at all stages of program development and in community problem-solving activities. Students and community people were included at the start on a broad-based committee set up in Toledo to first develop a strategy for establishing the environmental education curriculum. Several students involved on this committee were later responsible for pushing to have pilot programs instituted in their particular schools--certainly a useful means of support. Easter and Easting in Missouri, (see Easter and Easting) have also developed a program in which students draw on the community to provide learning situations.

Many alternative schools across the country have begun with or developed structures which are highly conducive to utilizing very innovative environmental education programs. Schools such as the Milwaukee Independent School, under Joe Nathan, the Parkway School in Philadelphia, the San Francisco Community School, and Community High of Ann Arbor, all provide opportunities for active participation of students in the community to work in coalition with community people.

The above models are a start in the development of means for helping students and community members achieve a wide range of participation in designing and implementing environmental education programs both in and out of schools. However, they are only a start. Only a very few school systems today have actually incorporated such innovative programs. Certainly, as more means are developed to encourage professionals to relinquish responsibility to parents and community groups, conflict with some entrenched professionals will show up as one of many frustrating obstacles to change. Perhaps more recognition must be taken of the fact that support means that certain trade-offs must be made along with gaining broad based participation in the change process, and this means sometimes having the right to fail on the road to success.

Key Questions

Key questions on issues of support in environmental education -- including many raised within body of paper and several which are pertinent to topic, but not directly raised.

1. Is strong national leadership for environmental education a trend to be encouraged or discouraged?
2. Should environmental education continue to rely heavily on federal funding for the impetus and implementation of programs?
3. How might environmental education gain better financial support for small localized efforts?
4. How can environmental education projects be handled so that they are inexpensive enough to be supported on a minimal budget?
5. Can environmental education get the major benefits of professionalism and also remain accountable to its clients at large?
6. How can environmental educators better ensure the real participation of non-professional community members?
7. How can students gain skills necessary for them to deal effectively with adults on environmental education issues?
8. Can systems of environmental education be designed in which power is truly shared between teachers and students? Is this desirable?
9. How can environmental education help lower class and third world students to gain the skills they need in order to earn a decent living and to participate actively in the socio-political life of their community?
10. Given the multidisciplinary character of environmental education, would it be better for it to develop as an area of applied interest within several disciplines as opposed to institutionalization into a separate discipline?
11. What kind of support bond is needed for environmental education occurring outside the school setting?

12. Is it necessary in order to build ongoing financial support for environmental education to deal with different issues than it is currently funded for? e.g. inflation in relation to world resource shortages?
13. Is it important for the environmental education movement to have operational models of community environmental education which are low budget and which include ways of developing seminars and project facilitation by non-professionals?

Annotated Bibliography

I. Financial Support

1. Alison St. Clair. "Brademas Passing the Act", Environmental Education Report, April, 1973.

This article reports on the views of Rep. John Brademas (D-Ind) on issues of funding for environmental education, with specific reference to the controversies surrounding the renewal of the environmental education act, and the placement of federal environmental education programs.

2. Clay Schoenfield. "Toward a National Strategy for Environmental Education", J. Ed. Res.: vol. 64:5-11, S.1970.

Relates projected needs and problems as seen to be involved with the adoption of a national strategy for environmental education. Includes views on needed organization at state, regional and local levels, in addition to the national, on which the major emphasis is placed. Basically makes the assumption that it is the responsibility of the federal government to provide effective leadership in environmental education.

3. Alison St. Clair. "Bogan Charts OEE Course", Environmental Education Report, March, 1973.

Reports on an interview with Walter Bogan, overseer of federal environmental education efforts in which he evaluates past and present efforts and starts to define potential future courses for governmental assistance to environmental education.

4. B. Ray Horn. "Perspectives for Developing a State Master Plan", The J. of Env. Ed., vol. 3, 2, Winter, 1971.

Relates basic rationale for state planning and elaborates on the components of such a plan which the authors feel to be important. Useful in placing the need for state and intra-state planning in a context consonant with national and regional strategies for environmental education.

5. S. P. Marland, Jr. "Environmental Education Cannot Wait", Am. Educ., U.S. Dept. of H.E.W., Office of Education, May, 1971.

Summarizes the development of a recognized need for environmental education in the United States. Discusses the role of the Environmental Education Act, in terms of its use as a framework for guidance and assistance, and its coordinating and catalyzing functions. Also discusses the role and need for greater state commitment to environmental education.

II. Professional Support

1. Mark Abrahamson. The Professional in the Organization. Chicago: Rand McNally and Co., 1967.

Collection of papers on many aspects of the role of professionals in organizations. Included as major themes are the socialization of future professionals, the relationship of organizational structure and control to professional norms and the management of strain as related to the problems encountered by professionals.

2. Alan Wolfe. "The Perils of Professionalism", Change. Sept.-Oct. 1970, pp. 51-54.

Provocative article which touches upon the dangers involved with professionalism which are seen by the author as relating to the ideology of contemporary social science professions.

3. Robert Reiff. "The Anti-profession and the Democratization of Knowledge", (unpublished papers). New York Center for the Study of Social Intervention, Albert Einstein College of Medicine.

Presents an historical analysis of the changing nature of professionalism in an attempt to demonstrate how changes in structure and function of professions are related to class and technological changes in social order. Declares that history has shown that professions cannot be entrusted with the social responsibility of being the "guardians" of knowledge, and calls for a new principle to become the central ethic of professions - that of the democratization of knowledge.

4. Morris L. Cogan. "Toward a Definition of Profession", Harvard Ed. Review. Winter, 1953, pp. 33-47.

Concerned with the problem of clarification of the concept of profession. Isolates characteristic attitudes towards the concept of profession and documents the variety of sentiments which surround the usage of professionalism.

III. Non-Professional Support Groups

1. Chesler, Egant, Crowfoot, et.al. Resources for School Change I, II, and III. U.S. Dept. of H.E.W., Office of Education, 1972.

These three manuals: I--"A Manual in Issues and Programs in Training Educational Change"; II--"A Guide for School Administrators", and III--"A Manual on Issues and Strategies in Resource Utilization", provide action-oriented guidelines for consultants, administrators and other people involved in school change. The analysis includes an overview of issues and concerns in schools, resources to be utilized, and numerous strategies for short and long-term system change.

2. Charles E. Silberman. Crisis in the Classroom. New York: Vintage Book, 1971.

A highly significant statement of the American educational system today in the "age of crisis". Portrays the crisis in the classroom as both a reflection of and a contributor to the larger crisis in American society. Includes sections on what is wrong with the schools, the failure of educational reforms, how the schools should be changed and the education of educators.

3. M. B. Miles, ed. Innovation in Education, 1964.

A compilation of articles on various aspects of innovation in education including research, case studies and theory. Relates documentation of methods for supporting the diffusion of innovation and points out various myths which have blocked effective innovation.

4. Joseph Chadbourne, et.al., Tilton School Water Pollution Program. A Curricular Guide to Water Pollution and Environmental Studies, Washington, D.C., Env. Prot. Agency, 1971.

An activity-oriented curriculum guide designed to bring students and their educational process in direct contact with society and its problems. The activities utilize a process of aiding student inquiry into knowledge and skills needed to solve environmental problems. Activities in this volume are concerned with water pollution, but are designed to be open-ended in order to allow paths of inquiry for student discovery.

5. J. E. Haney, writer, William B. Stapp, consultant. "Environmental Education--Can America Produce Enough Problem Solving Citizens", Research News, Vol. XXIII, Ann Arbor, University of Michigan, July, 1972.

Discusses the procedural aspects of the curriculum reform efforts involved in the establishment of an environmental education program in the Toledo public school system. Also discusses the environmental program of the University of Michigan and the Env. Ed. Plan for the State of Michigan.

6. Easter and Easting. "How One School Handles Environmental Education". School and Community, May, 1973, 12-14.

Describes a program in Missouri in which students draw on community learning situations in studying environmental conditions of local communities, rather than utilizing traditional textbook classroom procedures.

Interview Questions:

1. Overall, what reactions do you have to the working paper on support systems for environmental education?
2. What sorts of institutions do environmental educators now depend on for support--financial, intellectual, moral, administrative, career-development, political, etc.?

What do you see as your personal support system?

In what ways are you satisfied or dissatisfied with the support system for environmental education as you have observed and experienced it?

3. Where does the financial support for environmental education come from? Where does your own financing come from?

What is the impact of this pattern of financial support?

What alternatives could be considered, and why?

4. What role does professionalism play as a support structure for environmental educators? What are the advantages and disadvantages of this?

Do you see yourself as a professional? How does this affect your behavior?

5. Do you think professionalism and current financing patterns put too much stress on national leadership, and too little on local decentralization? (Is a national conference like this one a good idea?)
6. What is your relationship with the local school system? More generally, how well do school systems function as a support group for environmental education? What if anything should be done about this?
7. How do you view alternative support systems--such as parents, environmentalists, industry, students, and movements for social change?

In what ways is support from these groups better or worse than more traditional sources of support?

How does environmental education relate to these groups at present? How do you think it should relate to them?

What have you done to build community support? What do you think you should do? What do you think others should do?

8. What is the relationship between support and accountability? Is this relationship different for community support systems than for more traditional support systems?

To whom are you accountable? To whom do you want to be accountable? To whom do you feel you must be accountable?

How do concepts like power, participation, and alliance relate to your support system?

9. More broadly, from whom do you want support, and what will you do to earn and deserve it? From whom do you want independence, and what will you do to achieve or ensure it?

Interview Participants:

Anne Adamcewicz
Bill Casello
Willie Hodge
Jerry Mander
Bob Roth
Pete Sandman

- B. Casello: Would it be good for me to start out by telling what I can contribute to the group? My job is the coordinator of community resources at an alternative school. My job is to work with all aspects of the community and bring it into the classroom and work with lay persons. I've had two years in the program.
- J. Mander: How does this relate?
- B. Casello: The whole community can be a support system of education if you are able to identify and coordinate what you need. Working with people is the main skill, training them in environmental ed.
- A. Adamcewicz: Could you describe it?
- B. Casello: We have probably 700 people in the two years brought into the school from the community. There have been 50 courses which could be termed environmental, which cover political, natural science, things of this nature. Support has been through organizations like Audubon, city and county government. The parents' support is very strong. The weakest support system we have is the other public schools. They see us as a threat to their structure.
- P. Sandman: Is there any conflict between the different kinds of groups supporting you? You've said you've had top notch support from city government and environmental groups in the community, though city government and environmental groups are not at all fond of each other.

- B. Casello: They see us as a common ground. I've had virtually no friction. I've found our students receive both people with polite acceptance and would listen carefully and would weigh both groups, and both groups knew the other was coming in, and they would be trying to promote their position. Our students were able to accept this dual presentation.
- J. Mander: What community is this?
- B. Casello: Ann Arbor
- J. Mander: When you said that you have almost complete support from the community, can you tell me what the community consists of, socio-economically?
- B. Casello: The biggest asset is the University of Michigan. It is the largest employer, 5,000 employees. The influence in the community is just about divided between the townies and the rest, the landowners, landlords and the Republican Party, and there's the academic professors, and the HRP (Human Rights Party) on the other end. It's almost an even split.
- J. Mander: Is it a public school?
- B. Casello: Completely a public school, supported by public funds. The support system from minorities is extremely strong. But acceptance is not so good from minority students. Our minority kids simply don't take advantage of these things.
- J. Mander: How do you interpret the environment that confronts lots of students in minority groups and students that are poor, whether in minority groups or not. The environment that confronts them requires that they concentrate on traditional fields to meet their goals.
- B. Casello: That's pretty close to the way I'd interpret it. The sad part about it is they don't have the basic skills necessary. Our school is not meeting that need and neither are the rest of the schools.

P. Sandman: Is environmental ed, as it is often accused of being, a frill? It's an interesting enrichment for the kids that have the basics down pat, and pretty irrelevant to people who don't?

B. Casello: On the basis of the students I've been working with, I'd say that's 50 percent correct. We've worked hard to turn it around, but we don't seem to be making much success. Too many outside influences . . .

B. Roth: Look at the basic issues. What do you perceive the role of the school to be?

P. Sandman: I have never done environmental education anywhere except at the University of Michigan. I speak of it as part of a support system that I have to have. The school provides me with resources and with a vehicle, an arena in which to do what I want to do. It's an uncomfortable marriage, because what I'm doing is not a traditional form of training, and the school's not entirely comfortable with what I'm doing. And I'm not entirely comfortable with the way the school is structured. At the moment, it seems the school is supportive, maybe because I'm not getting anywhere. I don't know what happens if I do get anywhere.

J. Mander: I'm not an environmental educator, in the sense of being in an institution, so I may be speaking off the wall, but it seems to me that environmental ed seems to be defined in terms of choices. If people choose subject matter which will relate to making them better able to go get jobs to fit the success forms that have been articulated by the system, it seems to me that the role of environmental ed is to discuss the system, in terms of which standard it applies, the main environmental problems being capitalism, growth, progress, and individualism. There's no way to do environmental education that doesn't question the entire structure and context which encourages people to make their choices. If you want

to open up those questions, you're opening up to radical frameworks. What I want to know is can you open up those kinds of questions? What happens when you do? How do your parents and students relate to those types of subjects?

B. Casello:

We set these courses up, both with our faculty members and out in the community, but we seem to get the same students taking these classes, the same students over and over again, those that are aware of environmental problems. They only talk to themselves, they're not influencing minority and non-succeeding students and also the traditional reactionary staff.

W. Hodge:

In Toledo, there are several things which are very apparent. I'm not an environmental educator, but I've worked with the program. The support in the Toledo school system is greater in the primary schools than in the intermediate and secondary schools and faculty. It is functioning quite well in some areas, stagnant in others. One thing is a look at the minority students and what they get from the home. Whether they're successful or not--the push is in that direction. In that respect, environmental programs are secondary in the minds of the students. Secondly, we find that black students and minority students would have an interest in environment, but it has to be put in a context that they can understand. I think it has a bit of student support, and it has some faculty support, but I don't think it has the complete administrative support because I think if you start dealing with environmental ed you're assuming that the students will want to change and act in some particular direction. You're dealing with controversy from its inception. As you expect students to begin to act, then you're threatening its traditional structure,

which is accountable to groups in the community, pressure groups, business organizations, industry. How far do you go? Where is that cut-off point? Some high school classes are running around checking water pollution and running to some of those factories around the Miami River.

P. Sandman:

Can you go further, Willie? Support systems outside the school?

W. Hodge:

The community. You can build the support within the community

J. Mander:

The issues at the root are the same, whether you live on the river or you live in the inner city. At some level, it is the same issue. Somebody outside is doing something to your life. You have a hard time dealing with it, in that it's oppressive. The same system functions against one group of people as against another group of people. The group that lives on the river can probably do something about it more easily than the inner-city people. But whatever the issue is, isn't there a kind of commonality of experience?

W. Hodge:

How do you mold together those interests and gain that support? What is the common mold that you use? Frankly, I don't know.

J. Mander:

I'm thinking of a small group situation. One kid is from the inner city where the problems are mainly the freeways running through the neighborhood and the houses being knocked down and broken up, they can't do anything about it. Somebody living along the river has problems because the fish aren't biting. Those experiences are different only if it's not carried one step back or further--what is the same about those experiences?

B. Casello:

We're trying. What we have going in our school is something called The Forum, which is a group activity, in which there

is a heterogeneous grouping of students at random. But it cuts across the whole population of the school, 22 students and one teacher. And if it succeeds, and it's only about 20 percent successful, these 22 people comprise a unit in which they more or less have to get along, live together, relate to one another, solve mutual problems. These kids go off sometimes and live together for a week, on a camping trip, or a trip to Philadelphia--they do things together, they get away from the traditional setting, and they set things up in which they're forced to relate to one another

W. Hodge:

Let me give you an example of some of the problems we ran into in Toledo when I was an assistant in 1972. When we were developing this environmental studies program, we tried to implement it. One of the problems we had at one of the schools I was at was that the teachers were not that well adapted to environmental studies. We developed a program whereby the students would be exposed to problems within the community, and get aspects of that and then relate it to the world environment. We went as far as having Dr. Stapp come down and spend some time with the teachers, tour the neighborhood, point out different things to them to relate to children, the trees, the diseases in the trees, the black-topping, the pollution, he went through the whole thing, including the principal of the school. And I think it was quite informative for the teachers. But the problem we ran into was the teachers began to take the students out to different areas, and it wasn't really sinking in. The students saw it as time to get away, to get out of the classroom. At the same time a friend of mine had overwhelming success in a school mostly white, and it was the same thing we did. But we took our students to camp and were very successful, whereas he did not have much success with his camp program. First of all, they had to pay because the income level was too

high. And those kids went to camp all the time in the summer.

A. Adamcewicz: Did you go back and talk to the kids about why the pollution didn't interest them? It seems to me that what I am hearing is that there was a difference in values between Stapp and the teachers and then the students, and it seems a good time to do a process thing and find out where they were as far as environmental values. What's their definition of environment? There's a lot of emphasis on "out there" and the problems, and I think it needs to come back to I'm an Environment, and then start making the spheres going out. I hear a need to check out what those kids' values were, to find out why they weren't interested.

W. Hodge: We had some dialogue, and I admit we made a lot of mistakes. We didn't do a lot of follow-up or let our students make a lot of the decisions, which should have been done, and maybe got a lot more feedback from them. Basically, I see it as, they see the shopping center when they run down the blacktop to the store everyday for mother. It's no big deal. They're not concerned with what's underneath it, this is the orientation of the students. Their push is in different directions. Our program wasn't successful in that respect. On the other hand, at camp we had a gentleman named Bryce Harbow, and the last day down there, he used to prepare about 150 questions on a quiz, and within one week, you'd be surprised at what those students learned. You'd be absolutely amazed. I mean, they knew it all. This is the experience I had for two or three years in a row.

B. Roth: I think the point she's raising is good. In Columbus, we do a community study, we don't call it an encounter, but it's about the same kind of thing. The first flack we got from one of the black areas was "Hey, man, we don't want you coming in here snooping around and putting your

value system on us." We don't perceive the same things as the problem. So while we were focusing on blacktops, buildings, and transportation systems, that wasn't their perceived environmental problems. They were much more concerned about food programs, and things of this nature, for the starved kids, and from there, right on up through, jobs, training programs of various kinds--that was the context of environment they were dealing with. For someone just to walk through and say, "Look at the trash, look at the pollution, look at the sewage," all this kind of thing, they didn't want any part of it. So then they started re-structuring, through one of our courses, and they've now developed a vest pocket park. We now have 35 parents from the Head Start program involved in what amounts to a self-help program. We've made our resources available to them as they need them. It's really shifted a whole variety of foci here in what constitutes real-world environmental problems. The processing was the important part in asking what do you perceive is the real problem, then starting from that point and working up, instead of coming on with this whole business of air, water, solid waste, and saying, this is what we're going to study. That's the strait jacket that doesn't work, our experience shows.

J. Mander:

I would like to add one thing to that in terms of developing a movement. I think that you have to take it a step further. What the problems are in my environment is different from other people's. If we can all identify ourselves as part of a movement, which I assume everybody here can, then the idea is to build the movement some way and make it happen, which is some kind of an organizing job. Then, it's really critical, I think, not to stop at people's individual problem, environmental problem, but they have to tell other people with environmental problems about their environmental problem. It seems to me that the black kid in the inner city

and the white kid from the suburbs have to talk to each other, so that each of them learns about the other's perception. A community does develop around that. If people realize they're struggling with the same issues, that clicks and then they're part of the same movement. It's not just going away to woods or camp for a week, learning about the trees and the animals and insects, but it's also what kind of changes do people go through that become visible, and what kind of frustrations do they have. It's like going off to a separate environment to learn about environment. It doesn't really deal with the on-going process.

P. Sandman:

I agree with what you're saying, Jerry. It goes back, it seems to me, to something you said awhile before. When you can get different groups perceiving that their problems have something to do with each other, then what in fact you're probably talking about is oppression. Someone, or some institution, is messing around both the groups that want to go fishing and the groups that want their garbage collected. It seems to me that at that point it's possible to build a support system, with organizing. It's also at that point that it's crucial too, because that is the point when you're beginning to scare the traditional support systems. That's when, it seems to me, you're beginning to scare the schools. That's when you're beginning to frighten industry, and to frighten the systems that don't like getting collections of people who are oppressed in different ways together to explore what it is that is oppressing them. Have any of us reached that point? I know I haven't, where it's been possible to build a strong support system that you can be accountable to of people who are oppressed with respect to their environment.

R. Casello:

I think we've been successful to a point in building that support, because there were crises that were hitting the schools,

and they were perceived by all factions of the schools, people were striking out, looking for solutions, ready to accept almost anything. The alternative schools came just when it seemed we were having the most trouble in the schools with dope and riots and minority unrest and student voice and dress codes. We were perceived as a way of coping with that. In our schools, the weakest support system has been the traditional system. In this respect, they were happy to support the alternative schools because they were someplace to get rid of all their trouble-makers. Those people weren't happy with the traditional system. Kind of a negative thing, but it worked out to our benefit.

A. Adamcewicz: I have trouble understanding their use of the word "cope". They're going to cope with a problem and that says maintain, and it's maintenance that's status quo. I think that what environmental education is trying to say is to change. By definition and by practicality, it doesn't seem as if the schools are there.

P. Sandman: What happens, Bill, if the students of Community High, as a coalition, perceive that the traditional high schools are very oppressive environmentally, even more oppressive than Community High School, and take as an appropriate environmental task of this new coalition of students at Community High School, the liberating of the other high schools in town. What happens to your support from the school system?

B. Casello: We may get even more support, in the long run. In order for the other schools and their systems to survive, then they would have to recognize what's happening at the other school, and had better start giving them support. I think it happened with the Black Economic Development League in our town, in which the traditional churches first started to fight BEDL and then realized

that BEDL was a real threat to the structure of the church and if they didn't support them, the concepts that were behind them could indeed crack the structure of the church. So the churches almost two-to-one decided to support them. They started giving money and vocal support and facilities and organizational support. And a lot of things happened that way because they then perceived that the alternative was to lose their whole system rather than to change.

P. Sandman: My experience has been much different.

B. Casello: It depends on how strong they feel they are in defending their bailiwick, I guess.

B. Roth: What I see happening here, Bill and Pete, may be more a side effect to the use of confrontation rather than cooperation. It's been my experience over time that you have to work within the system largely to keep the communication process going number one, and secondly to slowly change it. The role of the school really has not changed all that much over time, only its administrative interpretation. The role still really as I see it is to first of all transmit the cultural heritage. And that's always been the role of the school. Second would be to develop the knowledge and skills to participate in and contribute to a changing democratic society.

A. Adamcewicz: But what's the definition of changing?

B. Roth: Okay now right. There's where we start to get at it. And the third one would be simply to develop critical thinking. Now that as the role of the school has not changed.

P. Sandman: I don't believe school systems have had the second or third goals historically and I don't believe most school systems now have this as their goals.

B. Roth: Okay, they have had it but they have not done it, perhaps.

P. Sandman: Have not wanted to do it.

B. Roth: Well, okay.

B. Casello: I think what we're doing here basically is looking upon people or community as the basic support system for EE. Okay, this is what we're doing. And then I think if we look at some of the recent trends that have begun to develop, we can see ways in which community and people are a base for environmental education and maybe not only environmental education but for the school structure itself. Look at the trends for instance with open classrooms, Boston University without walls, the system of high school students having the option to skip the last year of public school and going to college or the option of going to different classes or taking up different systems. I think we see a lot of basis for support of community people or even working within the community which I think would be good basis for environmental education.

B. Roth: This is why periodically I have to go back and reread some of these things, kind of get this historical perspective again of where it was we were supposed to be going. Then I can look more effectively at where it is we presently are and try to define out just exactly where we have gone wrong. Now, I think this is a helpful process. I'm basically an idealist. You have to be in this business, I think. And throwing back to these, those are goals I can support pretty strongly. Now, the interpretation and implementation is where we have our hangups. But I'm finding that even in a very traditional school system such as Columbus, Ohio, they do subscribe to these basic issues.

P. Sandman: I guess I envy you your experience. I've tried to do what I hear you saying you're doing, which is on the one hand within the system to work for incremental change and

on the other hand outside the system to organize constituencies of people who want to change the system. And I get boxed. That may be my lack of skills, but I very quickly get into a position where I'm going to have to give up on one of those two groups where my credibility within the system as an incremental change person is not going to stand up at the same time as my credibility with these emerging constituencies as an advocate and supporter.

B. Roth:

Okay, Pete, that's the point, then, that I have to ask for help. This is where I turn the role of working with Head Start people over to Dr. Mary Lynn Bowman who's got the communication of that constituency. I cannot communicate with them at all. I know that. I've tried and failed to. But she can. In fact, she's ended up being a representative on one of their councils. And here's a gal that's white in a totally black area that's doing a beautiful job. It's because of the mutual respect that exists there. And she's real. There's no fakeness about her. She's in this because she really feels it and wants to. And the people sense this and they can respond positively to it. And then by the same token we've got other programs of that type going on. Now, we're not going to save the world. No way. We're just a small force that's working in our way, and in relation to the total city of Columbus of 800,000 people we're just making a small dent. But it could mushroom at any time depending on the various constituencies you can bring together.

P. Sandman:

I'm sitting at a traditional institution in the U of M, I'm getting money from that institution, the State of Michigan, the U.S. Office of Environmental Education and a whole lot of other, very much part-of-the-system kinds of institutions. I'm part of an emerging profession of environmental education that has its own journals and its own jargon and its own professionalism.

In the context of all those support systems which keep me alive I am trying to be responsive to and accountable to students and emerging coalitions of community people who accurately are beginning to sense that they are getting ripped off and their environment is getting ripped off. Are other people not feeling boxed in? I have trouble doing what I'm hearing you saying you have less trouble doing, being in the system and working on the behalf of oppressed people.

B. Roth: Basically it's a matter of communication.

J. Mander: I think it's one of compromise but I'm not sure what the balance and limitations are. Sounds good, sounds good what you're doing but I don't know the questions to stick on you to see where the compromise is coming through.

B. Roth: It's very slow. You win some, you lose some. But you've got to have that goal out front as to where you're going.

B. Casello: Are there any other alternatives open to you? Are you going to be able to do as much outside the system without having to compromise yourself because you lack that support? And I think it's a kind of compromise and tradeoff if you are able to accomplish more by giving in to some of the support systems and still do more for your constituents than leaving the system.

A. Adamcewicz: You could come up with ideas and strategies which obviously are not going to work now and you're not going to get moral or financial support for them. You're on that breaking point. Or you're going to be in the middle, sort of pushing that whole system along. And that's a personal decision on your part whether you want to isolate yourself and push. In communications, you tell someone something once that they don't agree with, then they'll be very violent. Tell them again and they've heard it. Tell them again and

again and again and they start accepting it. Now it depends whether you want to be out there startling people or whether you want to be kind of implementing and pushing that whole mass along.

B. Casello:

I guess I've got another way of looking at it too. I'm a sneakier person than you are. You want to do everything above board and open, apparently. And I find that there are all kinds of ways of shaving things so that you get your own way. I've done that consistently all through education. I finally get my way all the time. And many people are just not aware of what I'm doing. It's not a lie or it's not cheating or it's not illegal but somehow or other I find ways of pushing things through that I want to do. They're in keeping with my philosophy and without really upsetting the apple cart.

A. Adamcewicz:

Watch it because that's compromise. You're talking about awareness. You see that in Washington all the time.

W. Hodge:

I'm with you because in the situations that I've been in or was in there's just a certain cutoff point that you don't go beyond because if you do you're going to be in trouble. Or you're going to upset the apple cart and you're going to make waves. And I mean it's just that clear-cut. For instance, the University of Cleveland is involved in working out a study for the city of Toledo--a two-year study of the basin of the Maumee River, which industry already is beginning to raise hell about. That's something that needs to be done, it should be done, it has to be done. But already, before it gets off the ground, just the whimpers of it is already giving repercussions.

P. Sandman:

What do you do there, Willie? As long as you're unsuccessful it doesn't matter. As long as it's not working, you haven't built a good constituency so there's no one to axe you if you suddenly fail in

accountability and compromise with the system. And everything is all right. But what do you do when things start working well?

W. Hodge:

At that point it's a matter of a decision that you have to make.

J. Mander:

I'd like to give my personal decision on that one. My experience is not different from yours. I was in a different context. I was the president of an advertising company. I did commercial advertising for a long time. At a certain point midway in that process I got turned, I was involved in certain kinds of political struggles and began to do media work, started doing advertising on political issues and then I began doing advertising on environmental issues and I began to get interested in the material I was writing about. This was about 1965. I began to see the contradictions between the way I was living and what I was doing and the material I was writing about. Then I began also to see that making this living that I was making had to do with getting support systems. My support system was commercial advertising. And people in those days, that was 1968, were telling me that I shouldn't get out of the advertising business because I had a real opportunity now to educate these commercial organizations in what they were doing that was politically wrong or environmentally wrong and that I should take that opportunity, that I was in a rare spot which is parallel to the spot that everybody here is in. So I tried. I had a car account at the time. It was a Rover, it's a small car. We did all their national advertising. We proposed to Rover to do an educational series about cars. We worked out all the ads at our own expense and there was a statement about what the future of cars had to be in the world. It involved the eventual elimination of cars, their replacement with public transportation or sharing of cars or no style changes, no new cars, all that stuff. And

we told them we all know this to be the truth, the people at Rover knew that to be the truth, which is an important fact, and they themselves were environmentalists. Actually at Rover they sort of were. They were birdwatchers, members of the Sierra Club and so on. Not like General Motors, it's a different kind of organization. But they wouldn't touch it with a ten-foot pole. They wouldn't go near it. When I revealed this conflict to a reporter one day and it wound up in a story in the Wall Street Journal, we were fired. Immediately. That day. By telegram. It became very clear to me then that your support system will really only let you go so far. You can say it as long as it doesn't change anything. So once you realize that you can only go so far as long as it doesn't change anything then what are you doing? So that's the basis on which I got out of it. Either I was interested in the changes I was talking about and could I make those changes, or are the changes only cosmetic changes and placebos and so on? Are you going to be able to do your work in the context of support system rules? It becomes a personal decision but I wanted to give my testimony. I don't know what happened as a result, but there are other kinds of work to do. All work is good. For me that was progress. It was progress even though I was no longer in a position to relate to these corporations. I couldn't influence them but then I didn't anyway.

B. Casello: Maybe someone else can.

J. Mander: Could be

P. Sandman: There's another side of this thing that I was thinking about as I was listening to you talk. I think I can do maybe what you do, Bob, and what I'm still doing, comfortably if I were sort of a lone representative

of my viewpoint acting the role of gadfly within a system. Where I get boxed is where I begin to get tied in to constituencies, to groups outside the system I'm functioning in who are pushing me and who are pushing the system from the outside and who don't understand and have absolutely no patience with the kinds of compromises that we've all kind of acknowledged you have to make to make changes from the inside. It's not just a matter of my conscience versus the system. It's my constituency, the constituency I want to be accountable to versus the system.

B. Roth:

There's a goal problem here, Bill and Pete, and I think that might be the most important point. This goes back to the goals of education, and if that is held out in front as a goal towards which we are going then some of these other tradeoffs become possible and tolerable. It's like a chess game. I'll accept a setback here if we can move our queen down to the check-mate position.

B. Casello:

Yes, but the question is can you do that?

B. Roth:

Not always, but maybe you can get your bishop down within striking range

Comment by Pete Sandman:

The participants in this discussion were very diverse in their relations with their support systems. They ranged from a traditional educator comfortable with his support to an advertising drop-out who had found his support so compromising that he had quit, from an environmental journalist who viewed herself as part of the support system to a teacher in an alternative school who had built a strong support system in the community. Because of this diversity, the discussion was able to identify and deal knowledgeably with all the major sources of support (except funding) for environmental education.

The interviewer and at least one other participant saw themselves as burdened by inherent contradictions between their goals and their institutional support system, and between their institutional support system and potential support systems in the community. Much of the dynamic of the discussion centered on the responses of other participants to these confessions of compromise. Some began to see contradictions in their own support systems, while others explained the ways they had found of lessening or eliminating these contradictions.

Differences among the participants in how painful they found their relations with support systems seemed to depend largely on differences in their goals and values.

This was clear at many points in the discussion, but was not explored very tenaciously. The tendency instead was to work for clarity on one's own positions of others, then leave the differences unfronted, almost as though people were collecting data on each other for use in later confrontations.

The Relationship Between Environmental
Education in Schools and the Structure
and Process of Formal Education

By Jim Garry in consultation with project staff

Schools are one of the main, and potentially most effective means of environmental education. Environmental education is designed to help correct some problems with our society; problems that can only be corrected by making some very basic changes within this society. Yet, schools as they have, for the most part, come to be in this country are formal systems, tied to the status quo, that bend with reluctance and often break from tradition with an explosion that can be damaging to the students and to the community.

In order to effectively teach environmental education in schools, it is necessary to understand how environmental education and the formal school system can be blended together in a way that does not take the life from environmental education. The most conservative formal education systems in this country will not openly embrace environmental education as a new foundation on which to build or to rebuild schools, or as the best way to prepare citizens for responsible community action. At the other extreme, the most messianic environmental education programs will never tolerate sharing with formal systems. Since either of these extremes promise little hope for teaching environmental

education in most school systems, it seems necessary to examine what compromises are possible, what compromises are necessary, and what compromises are wanted in order to establish and to maintain environmental education in the schools of this country.

The outcome of the compromises between environmental education and formal education may well be the single most important step toward insuring a future world of high enough environmental quality to make life more than mere survival. In order to strike compromises that insure environmental education not only a future, but a future in which it will continue to grow and to aid people to aid themselves, environmental educators must be in a strong position to bargain by being well aware of all alternatives and possible approaches to environmental education.

Our first question might well be what is it we propose to do. We propose to help develop environmentally aware citizens who are willing to take responsive and responsible action and have the necessary skills to do so. Aware, we must remember, of an environment that includes not only parks, grass, trees and the like but rats, tenements, apathetic people, crooks and corruptible government officials as well.

The next question is how we propose to do this. It is on this question that different people and different situations will produce different answers. Can environmental

education be taught only as a school course or do environmental educators need to work as well with adult education in the community and with mass media to try to educate a larger constituency than students? Is it more important to train environmental educators who are really communicators that can reach a mass, community audience rather than only students through a school? More importantly, it seems, how can school teachers, communicators, and even environmental organizers work together to reach not only students but an entire community and to help that community to become environmentally educated?

Even though the solutions are as many and as varied as the situations, there are some perspectives and approaches that seem to lay the beginnings of a framework of working through a formal system in which to deal with these problems. As a starting point it seems wise to look at some of these perspectives and approaches.

There seem to be three basic ideas on how to change people's life styles. One view holds that through instruction and education students will, by rational processes, learn what the teacher has to offer and develop the good values and attitudes they need to become environmentally effective citizens. A second idea is that teachers should, rather than simply present information, actively work with their students to help the students to work out values and

attitudes that they decide are good and useful to themselves and to their community. Both of these ideas hold that once people's values and attitudes have been clarified, their behavior then changes in a corresponding manner. The third view claims that it is easier and better to first change people's behavior and that their attitudes and values will then change to conform with their behavior.

Formal education systems in this country tend to use a special form of information transmitting to teach certain subjects that could be controversial. History and civics courses, for instance, have often aimed at having students clarify their values. Unfortunately the teaching techniques used have often been ones that were so biased the students were presented, in effect, with only one side of multi-sided issues, and had strong pressures put on them to conform to the one side. Yet, after the social, political and ecological questioning of the last decade, it seems, now, to be much easier to start to work on having students truly work on values clarification. There is also some precedence, now, for action-oriented programs, both for values clarification and for attitude change through behavioral change. It is still not easy, in most places, to institute these types of programs, but it is possible.

Given these basic ideas on how change can and should occur, how can a classroom teacher best conduct classes to

maximize student benefit? There are basic techniques related to these ideas and used by many teachers. Some teachers in the formal school system view themselves not only as conveyors of knowledge, but as disciplinarians as well. In some subject areas it is difficult to utilize almost any teaching method other than the teacher as possessor and conveyor of knowledge to the recipient students. Yet, it seems, too often this method is used to teach more than academic subjects; it seems to be an all too common way to teach discipline. This method does lend itself to a teaching model similar to the information model. If a teacher and students feel that the students only need information to rationally decide on and to clarify their values and to then act in accordance with those values this method of teaching will work very well.

There is a second technique, used by some individual instructors and by some environmental education programs. These instructors and programs have attempted to put students on a more equal footing with teachers. These attempts have generally tried to significantly increase student-teacher interactions and encouraged students to take a more active role in their education. This active role has often been considered to mean taking education out of the classroom and into the "real world." Attempts have been made to utilize outdoor learning experience and sometimes to encourage student participation in community problem-solving activities. This

style of schooling lends itself well to behavioral change as well as to attitude and values clarification and skill development in environmental education.

Environmental education is, perhaps, different from some courses in school in that the desired outcome is action rather than an increased intellectual ability. A nationwide survey of 150 environmental educators (taken by a team of University of Michigan researchers) shows that the majority of these educators felt that it was very important for environmental educators and their students to become deeply involved in local environmental problems. This would seem to indicate that action-oriented programs rather than strictly intellectual ones might be more in line with environmental education programs. The more open, democratic, programs seem to lend themselves to action-oriented projects designed to help students clarify their values or programs designed to first change students' behavior.

In almost any formal education system in this country it will be necessary to change the system somewhat in order to effectively teach environmental education. There are some major constraints on implementing environmental education in formal schools. While environmental education is interdisciplinary, formal schools stress separation of disciplines. While scheduling is one of the pillars of formal schools,

environmental education is best under a lightly structured, guidelines system. Environmental education can only be truly effective if it strides over the ethereal wall that separates the schools from the communities; the students must not only become active in the communities but the communities must become active in the schools. Environmental education depends on an understanding of personal, political, sociological and technical relationships to the world that may be at variance with the norms of the schools, the communities, etc. Aiding a student to develop and understand personal values and to pursue them may even be illegal in some places. And to top off the other constraints, environmental education would require a reorienting of the entire teaching profession. Teachers would need to understand relationships of their fields to environmental education. Consultants and coordinators would be essential. Certification of teachers might even be questioned if their knowledge of environmental education was considered deficient.

Even if an environmental education program can be started without changing a system, if it is effective, it will result in change of a system. A successful environmental education program will, if nothing else, produce students who are willing and able to work for improving their environment. Since this type of work would involve the school and/or the community, it is quite possible that the school and/or

the community might find it threatening to the status quo. This type of threat must be taken into account when thinking of how best to introduce environmental education into a formal system. In order to change schools so that they are receptive to establishing (or keeping) environmental education programs, it may be as necessary to change the environmental values of the faculty, administrators, and community members as to change the environmental values of students. Techniques that may be useful in teaching environmental education may also be useful in educating the administration of a formal school system to the need of an environmental education program.

There are three basic models of change that seem to apply here: the rational-empirical model, the normative-reeducative model and the power-coercive model.

The rational-empirical model is based on the assumption that people are rational and that change can be arrived at through a process that explains the desired change, the reason for the desired change, and sufficient evidence to prove that the change is desirable for all those involved. If there is ample proof, of a variety that will convince those in power, then this system seems ideal. However, it has been noted by various observers that this method is used most successfully by those already in power. If it can be successfully employed, this model has potential for creating much change with few repercussions since it depends on using existing power structures.

The normative-reeducative model of education is based on the assumption that when people's values change their behavior changes. It contends that the basis of educational thrust should be at rethinking and reestablishing the environmental norms of our society through a program of reeducating the students. Since, this model contends, the present values of the society and its members are not environmentally sound, the norms by which we view our world need to be changed by the formal education process.

The third model, the power-coercive model, is probably the most feared and respected of the three models. It is normally thought of as a tool of partisans that have no system-bestowed power. It is feared and respected for it promises change; in a school it almost invariably results in either increased liberties or increased oppression. It is a tool dangerous to the user, but powerful and perhaps the only resort of, for instance, students interested in changing the system.

It will not always be necessary, or even possible, to use only one of these techniques. Environmental educators must know not only how to use these techniques but also when to use them. Educators must know people well enough to know which method will work with which of them and how to blend these methods to fit together when working in groups.

One tool that may be useful with any of the above models is compromise. The extreme situation would be for all educational systems to be based in environmental education with

all curricula and subject areas integrated into environmental education. Presently, many systems are opposed to any change within the present system, often even to the point of not wanting environmental education added to the curriculum in any form.

Three questions again arise. Do we wish to compromise at all? What compromise is necessary? What compromise is possible? The extreme position of wanting schools to become environmental education centered, with other subjects integrated into environmental education, has only been applied in a formal system once. The University of Wisconsin, Green Bay Campus has become an environmentally-centered campus. The fight to attempt a system change of that nature in a public school would be difficult. Teaching environmental education as part of an existing course or as a separate course serves to separate environmentalism into a separate discipline rather than encouraging students to integrate it into all aspects of their lives. It may well be that, since one extreme is strategically undesirable and the other extreme is generally tactically impossible, the compromises of the middle ground are what we must work for, at least as a first step. Just what compromises are available?

The best compromises might be one similar to the environmental education program in Toledo, Ohio. There environmental education is being integrated into the total

curriculum of the school system. This type of compromise may not be possible in many school systems. If it is not, an environmental educator seems to be left with two choices, either to attempt to have environmental education added by integrating it into existing courses, such as science or social studies (or perhaps in special education, as there is often more freedom there than in most other programs); or to be added to the curriculum as a separate course.

There are as many factors contributing to the choice of compromises as there are people involved in a situation. The administrators, the faculty, the community, the students, the environmental educator, the situation in the area and a myriad of other causes such as what the environmental educator has been trained for and feels comfortable doing all are involved.

There are problems inherent in all these approaches; some problems common to all and some specific to each. Qualified environmental education teachers are in comparatively short supply. For any of the three integrated approaches, teachers would have to receive some training in environmental education and at least one other speciality so that they will be able to tie environmental education and other subject areas together. For a system that added a course or courses in environmental education, additional, trained environmental education faculty would be required.

Additional faculty and additional training presents another problem, financing. How does a system pay for additional faculty or more training for existing faculty? This problem could well necessitate some compromises even if the system was willing to change. Changes requiring additional expenditures may cause a system to balk and to modify anything in an effort to save money. The environmental educator must keep this in mind when working for change.

When additional monies are needed, the community comes into the picture. How does the environmental education program of a school system fit into the community? What support or resistance can a program expect from its community if it is attempted? And what of the school administration and faculty? How willingly will the people who teach in and administer the school accept innovation?

The most important people involved in all this talk of change are the students. What rights are we willing to acknowledge that they have? Will we encourage them to take an active part in their educations and in their lives? Whether we hope to first change students' behavior or to first help them to clarify their values, we have behavioral objectives as a goal for environmental education. We want to produce environmentally aware, skilled, responsible and responsive citizens. Are we willing to encourage students to help decide what those objectives are?

Students tend to take their education seriously only when they see a use for it. (Too often the use they are given is simply the threat, immediate failure; there is sometimes too little emphasis placed on the real good an education can be for a student.) When they see a use for some facet of their education, students will take an active part in that education.

Any environmental education program that is action-oriented and allows the students a large part in decision making may find that the administration and/or the community would rather avoid having students working actively in trying to solve community problems. Most schools are discipline-centered and there is oppression of students when they attempt any actions not directly covered under existing rules. Environmental educators should take into account the degree to which they are willing to support their own actions and the actions of students whom they awaken and introduce into the "real world".

Administration and community response may also run against environmental education programs that encourage students to work at clarifying their own values and coming to understand the value of the school administration and the community members. For example, a bill was introduced into the Michigan legislature in 1973 that, had it passed, would

have prohibited any courses designed to help students clarify their values.

There is one form of school that is gaining more acceptance by formal systems and is given more freedom of action than are formal schools. These are alternative (open, free, open class room, etc.) schools. While it is common to think of alternative schools as being outside the formal system, more and more formal systems are adding alternative style schools to their systems. Originally, and often still, these alternative settings were generally for younger students. But now systems are adding alternative schools through the high school level. Many environmental educators see these as the key to environmental education in formal systems. And well they might be. The opportunity to work with students and to allow students to work in the community is clearly available in alternative schools. Environmental education fits most comfortably with the freer environment of an alternative school.

But, this tool has two cutting edges. An alternative school within a formal system is an ideal place to dump faculty and students who are malcontents, troublemakers and other sorts of problems to the formal setting. Then, anything that goes wrong in the alternative setting is available ammunition to use against the alternative education concept. More importantly, it seems, it isolates the people who want

to change the schools into environmentally-aware institutions. The real job of environmental education can become much harder if the environmental educators are kept isolated from the majority of the students. A situation that isolated the environmental educators would require the environmental educator to build a strong support base within the community. However this would have to be done without the formal administration discovering how strong the alternative system is becoming. The potential for alternative schools is great but only if the equally great barriers are overcome.

The problems and potentials of environmental education in formal school systems are many more and much more varied than presented in this brief sketch. This paper is not intended to be a document to be used as a definitive statement on environmental education and the formal education process, but rather a series of questions to help search out as many constraints against environmental education and as many strengths as environmental education has and can use, as well as some hints at possible approaches to making environmental education more effective in helping to produce environmentally aware, responsive and responsible citizens. In order to aid in keeping these questions in mind, there are two lists accompanying this paper. One list is of constraints and problems raised in the paper and the other is

of important problems environmental education faces with formal schools that were not raised in the paper.

Some Major Constraints of Implementing Environmental Education in Formal Schools

1. Environmental education must deal, not only with nature education but with the whole environment.
2. Are formal schools, or any other kind of schools, the best place to teach environmental education, or is it better to teach it through the mass media or some other approach to the entire population?
3. Environmental education is inter-disciplinary. Formal schools stress separation of disciplines.
4. Environmental education depends on an understanding of personal, political, sociological and technical relationships to the world that may be at variance with the norms of the school, the community, etc. Aiding a student to develop and to understand personal values and to pursue them may even be illegal in some places.
5. Environmental education is best under a lightly structured (guidelines) system that is not bound by clocks. Scheduling is one of the pillars of formal schools.
6. Environmental education can only be truly effective if it strides over the ethereal wall that separates schools from communities.
7. Environmental education would require a reorienting of the entire teaching profession:
 - a. Everyone would need to understand relationships of their field to environmental education.
 - b. Consultants and coordinators would be essential.
 - c. Certification of future teachers would depend on understanding environmental education.
8. Community involvement requires not only that students become active in the community but that the community becomes active in the school.

9. Implementing any type of environmental education program is going to cost additional money.
10. Some environmental education programs, such as the alternative school approach can easily isolate environmental education rather than bring it into mainstream education.

Some Constraints Not Mentioned in the Paper

1. Most formal schools are racist, sexist, and elitist institutions. This can never be compatible with environmental education.
2. The formal schools of this country can, generally, be considered part of the ruling class society that is responsible, not only for the pollution and misuse of resources, but the racism, sexism, and elitism that is responsible for our social injustices as well.
3. Formal education systems will fight with all the means at their disposal any attempt to change the status quo.
4. Environmental educators are human. They have developed habits, such as eating, sleeping inside when it rains, sometimes raising families, etc., that may well hamper their dedication to environmental education.

Key Questions

1. Can environmental education function with formal school systems?
2. Will environmental education change schools, whether it tries to or not?
3. What compromises can environmental education make with formal education systems and still be effective?
4. How does environmental education justify the additional expenses it requires of a formal school system? Should it try to justify its expenses?

5. How does environmental education justify involvement with formal school systems that are a major part of the socio-economic system that is not only responsible for much of the world's pollution, but is also responsible for social injustices throughout the world?

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Interview Questions:

1. Can the philosophy of environmental education be achieved within traditional schools?
2. To what extent must the structure and processes of schools be changed in order for environmental education to be effective?
3. Should environmental education be integrated into existing school curricula, taught as a separate course, or be the focal point for all disciplines?
4. What are some of the major constraints of implementing environmental education into formal education? Can these constraints be overcome to the degree that environmental education can be effective?
5. For environmental education to be effective must there be a shift from autocratic to a democratic teaching style? If yes, how might this occur?
6. Are formal schools, or any other kinds of schools, the best place to teach environmental education, or is it better to teach it through the mass media and community organizations?
7. Should teachers be certified in environmental education? What are the strengths and weaknesses of the certification approach?
8. What compromises can environmental education make with formal education systems and still be effective?
9. How does the concept of the "open classroom" fit into the concept of environmental education? Is it easier for environmental education to be effective in an "alternative school setting" than a "traditional school"?
10. What standards should environmental education be held accountable to school systems and local communities? Who should set these standards?

Interview participants:

Jo-Ann Albers
Dean Bennett
Joe Chadbourne
Willie Hodge
Michele Russell
Bill Stapp

Bill Stapp:

This session is designed to concentrate on the relationship between environmental education in schools and the structure and processes of formal education. One of the key questions we want to focus on today is whether environmental education can be achieved in traditional schools. That raises the question of what is environmental education. Historically, environmental education came out of the field of conservation education, which had its beginning around the 1920's. The focus was largely on basic resources: wildlife, forestry, soils; and revolved largely around state and national issues. Environmental education emerged around 1967 and placed a major emphasis on the total environment. Environmental education is deeply concerned about community problems such as air and water pollution, shortage of low income housing, traffic congestion, energy, life styles, etc. It is deeply concerned about people who have little power and are the most environmentally abused. Environmental education is more problem-oriented than conservation education and therefore is deeply concerned about looking at environmental problems from a total perspective: ecologically, economically, politically, socially, etc.

J. Albers:

Would you say that environmental education has more of a school origin than conservation education?

B. Stapp:

No, I wouldn't. The early years of environmental education did have a high percentage of school people because the movement came out of conservation education which placed high emphasis on school programs. However,

recently environmental education has placed a great deal of focus on community organizations and mass media.

J. Albers:

That explains why so many of the early people were in the school systems.

M. Russell:

Do you think there is anything else that is significant about the definition of environmental education that you talked about other than people just woke up and noticed that they were all living in cities?

B. Stapp:

Look at the many things that were occurring in the 1960's. I think that we as a society became more deeply concerned about the social environment and the need for building a more strong, powerful and reinforcing environment. The American people were also more aware that they were an urban nation, faced with many severe environmental problems that were not being faced by our society. If we say that we want to help the populace become knowledgeable about the environment, effective and skilled in helping to solve environmental problems, and motivated to work toward environmental solutions, then we come back to the question, can the process of environmental education be achieved in a traditional school. Can we really be effective, or do we have to build all kinds of coalitions? Are there certain kinds of constraints within the school system? Do you feel that there are some really good opportunities?

M. Russell:

It obviously depends on the school. There is a huge amount of diversification and specialization within the Detroit district. The major problem in the schools is the militarization of the educational environment. It allows very little to be taught in any subject. In Detroit, the phenomenon of locked doors, guards patrolling the exits, the sale of narcotics, that whole spectrum of social chaos or disorganization is a part of the whole environment and is also institutionalized within the schools

themselves. This is the context in which we have to look at the schools.

B. Stapp:

Don't you think there is a lack of humanness in schools?

M. Russell:

It's all a part of the same thing. I have a hard time divorcing the school as an institution and environment, as an atmosphere, from the city. Everything that goes on in the city goes on in the schools.

D. Bennett:

You brought new insight into this, because what is traditional with you is untraditional with me. There is a real difference between the schools that you are speaking of and the schools that I am familiar with.

W. Hodge:

Regardless of the differences between the schools, we look at the traditional role of public schools and then we look at the role of environmental education. The purpose of schools is to acculturate people into the mainstream of society. We could say that the public schools' main job is the maintenance of the status quo or to maintain society as it exists. There is a basic discrepancy between that and environmental education, which is supposed to serve as a "change agent." Therefore, you have a large question mark about environmental education and the traditional school system. I know of some programs in Toledo, for instance, where they'll work with you to some point. But what point? You can work in traditional schools to some point, but once you go on beyond that point, you are in trouble.

D. Bennett:

Is the philosophy of environmental education in conflict with the philosophy of public schools? In other words, is the outcome in the type of citizen that we want to achieve different? I think that anyone would agree that the outcome is what we want.

- B. Stapp:** What we want is a citizen that is more effective in making decisions about his environment.
- D. Bennett:** So the question is, where is the difference? The difference lies in the way we would like to educate a person. It seems to me what E. E. is trying to advocate is a way of teaching that doesn't exist in the public school. I spend a great deal of time trying to work to change the way teachers make their living; that's a hard thing to do. I would say that it can be achieved in a traditional school by changing the traditional schools so that we could have a new tradition.
- M. Russell:** It strikes me that schools are very stratified in this country, and school systems which are most responsive to change are most efficient in at least transmitting knowledge and skills. There are sections of the school system which I think are right for the environmental education approach that we all are talking about. There are also those school systems that not only need this environmental education exposure the most, but will do the worst things with it.
- J. Chadbourne:** The most interesting situation that I see is right under our noses. In Cleveland, there are two large adjacent metropolitan populations. In one, the school is open and free and has a great program. The reading scores of the fifth grade students have doubled in one year. The other system is the most oppressive, tyrannical situation I have ever seen. One school does not want to hear what the other group is doing. It is so unbelievable that one group can be so different from another.
- B. Stapp:** How would you change the structure of traditional schools? What would you do about those atrocities to make environmental education more effective?

M. Russell:

I would pose the question differently. If you think within the conceptual framework, define the school as an environment that needs to be changed. I think the possibilities are monumental, such as taking more field trips outside of the school, an environmental issue which can be developed into an organized thrust. One thing would be making sure that windows that get broken in the middle of winter get fixed. Deal with the total environment that these students come from.

J. Albers:

It seems that recognition of individuality is the basis, because environmental education is a very individual thing. The problem of oppressive schools is a lack of respect for individuals and a recognition of the need to let each individual achieve. Environmental education cannot take place in an oppressive setting because it does not recognize individuality.

W. Hodge:

We have to get a little bit more focus here. We are mainly talking about blacks schools, inner-city or minority schools. On thing that I have found in working with low-income students, the push that they get at home is not environmentally oriented. Even though they fail in school, the push they get is to "get a good education," that's the key. So even though they are failing at a traditional school because they lack the skills, they are still oriented in that direction. We must put environmental education into a context that they can understand and identify with. Housing, urban development, slums: this is what they could identify with. You've got to get your support system, which is the people. Another thing to look at is in your more affluent areas. You have to have some way of tying together the environmental interests of one section of the city to those of another.

M. Russell:

For people who have relatively more power and whose influence in society is greater, the value-centered position that should be

pursued is interdependence and mutual responsibility.

W. Hodge:

You can't go into an urban school and teach ecology and pollution. They don't want to hear it. On the other hand, you can talk to the people with boats; pollution in Lake Erie is something real to them. I feel that in an environmental education program, you have to focus on issues relevant to the youth you are working with.

B. Stapp:

If you were a teacher in a school, and you saw the whole system as oppressive, would your major task be to get the students to work with you in order to correct some of that oppression within the institution? Would you move into the community to deal with some of the oppression problems? Would you put the major focus on the school or the community?

W. Hodge:

I feel that you have to get accepted first. You can probably get a system to accept a program in most instances as long as they don't see anything threatening about it. Once you get there, you have to deal with that community base for support to insure survival. In Toledo, the environmental education program got tied up with the camping program at the elementary level. The camping program became so solidified that when the money is cut by the federal government, there will be such a holler by the people that Toledo will continue the program.

J. Albers:

Is the camping program a combination of socialization and outdoor education?

W. Hodge:

It basically started as a program to get inner-city kids out into the rural environment and involved in fishing, camping, biking and so forth.

J. Albers:

I know of a new program where they paired dissimilar schools. They are very much into creative dramatics. The focus is not much about learning about the out-of-doors but learning, in an out-of-doors setting, that children of different socio-economic backgrounds are so different and can appreciate nature alike. If you are going to have an education program, I don't think that in the traditional classroom it can be accomplished. You've got to move out of the building in order to relate to the environment that is immediately accessible.

M. Russell:

One, I agree that the only way environmental education can have systematic success is if it is presented in a way that is not threatening. Very often in the most oppressive setting that we have talked about, the least threatening thing is getting kids out of the schools. One of the hardest problems that they have is keeping kids in school anyway. Once that happens, I think one guideline is to make the program not only culturally expansive, but politically relevant to the concerns that the population is going to have to deal with. As much as possible, the environment that is studied should be an extension of what they live with.

J. Chadbourne:

Kids must perceive that the activities they do are useful to the community in which they live. If they don't see that, it becomes busy work and that is the end to their commitment.

J. Albers:

We have this constant debate in Cincinnati about the inner-city being so ugly. So the park board goes out to plant some trees that are abused or cut down for switches. Nobody has done anything about educating people that little trees grow up to be big trees and that it will be shadier and cooler if the trees grow up. The Park Board says it can't plant anything in the inner-city because we don't have the funds to care for them and they're

just going to be abused anyway.
So you start as basic as that,
that a class gets a tree to plant.

M. Russell:

I think there is a deeper issue too. Part of that bias, I think, is that you are talking about planting trees in the middle of cities to make them beautiful and make them a garden community. You must weave in the concept of what beauty is. I am talking about making cities beautiful and functional environments for the population that lives there. There are more important and fundamental areas to tackle, for instance, dealing with the whole issue of architecture. What are the playgrounds like? How do you make a vacant lot safe?

J. Chadbourne:

Yes, but how do you get kids involved?

W. Hodge:

I'll give you an example of a situation that we had at Lincoln. We started off by looking at the neighborhood, the commercial as opposed to the residential areas. They couldn't have been less interested in the black topping or what was underneath it. They were not interested in which trees had leaves and which trees didn't. When we looked at and went into commercial as opposed to residential areas, the train stations, the factories, the abandoned houses, the garbage that is dumped on the side of the railroad, they went out with their cameras and took pictures of them. This is what they were interested in. From that point we had a slide presentation and asked what they could do about these things. They began to come up with alternative answers like "tell the owners of the factories (they were eighth graders) to stop polluting the air." When asked how, they said to smash up windows. It was like a snowballing thing once it began.

- D. Bennett: Well, what happened to that program?
- W. Hodge: At that point of the year, they wrote letters and took slides, but we let it go at that. It wasn't that I didn't want to go further.
- D. Bennett: Well, why couldn't you go on?
- W. Hodge: Well, first of all, it was the end of the year. The second reason was that when we tried to find reasonable alternatives, it took a level of sophistication that they didn't have. We also discussed the fact that a lot of the parents worked in that factory.
- M. Russell: Someone mentioned the consciousness of the individual instructor, because one thing you can say in terms of the factory and the school is that you really shouldn't bust up those windows. If you bust up those windows, your parents are going to be out of a job. My approach would be to do some education on who keeps the factory going and who makes the policy that decides what kinds of chemicals to make that makes the area polluted. Students are very vulnerable, they have no rights. This issue between the school and the factory becomes a link for the students talking to their parents about some strike issues, and they become organizing issues with a union. In 1969 there were a whole range of wild cat strikes which had community support. Just because there are definite limits on what you can do does not mean your definition of environmental education should be limited to the context of the school.
- J. Albers: I think that basic groups are important to problem solution. What about the kid who goes out with a water-sampler to take samples of polluted streams that run into poor neighborhoods and through affluent neighborhoods and he comes up with some

raw data which say that this water is dirtier than that water. The thing that is happening is that he is going to be expelled from school if he doesn't handle the data right. My feeling is that if students had a list of community organizations to which the data could be immediately transmitted, the students would be more effective. Students need to throw the whole thing back to the community for solving because sometimes it is beyond them.

W. Hodge:

At that point, the business calls the board of education, the board of education calls the superintendent, and the superintendent calls us psycho.

M. Russell:

That is why I think that there are two ranges of problems. One kind leads inexorably into the major power institutions and the other are qualitatively different problems which are reform issues that make it a little bit healthier atmosphere for people to survive. This is why I started this discussion saying that my approach to this would be to deal with the schools as an environment. There you have a fairly self-contained unit.

B. Stapp:

One of the reasons that I was originally interested in working with the Toledo public school system was that I felt that there was a commitment from the top administration. I was convinced that the school system was interested in involving youth in real community problem-solving activities. Before we launched the program in the school system, I had a group of inner-city teachers interview the members of the central administration and school board members regarding the philosophy of environmental education and the problem-solving model that was to be introduced into the system. The teachers wrote guidelines as to how to handle controversial issues and values clarification strategies. The purpose of this strategy was to protect teachers engaged in community problem-solving strategies with their students.

This was particularly important for the inner-city nontenured teacher. A second point that I might make based upon our conversation up to this point is that perhaps the best starting point for environmental education is within one's own school building. If the school itself is not a humane environment, and there is oppression within the institution, one should start environmental education to rectify this problem. Once you have your own "ship" in order then move into the community to work on other problems relevant to the youth you are involved with.

J. Albers:

I'm concerned about the failure of environmental education as it relates to citizen action concerning current problems. Cincinnati had for one year an environmental task force of citizens. The organization was composed of groups with subcommittees assigned to different topics. They conducted hundreds of hours of public hearings, and I'll bet you that there weren't a total of 50 college students who appeared at the total amount of hearings. There was no participation of lower-level education or faculty. It seemed astonishing to me that there would be a lack of attendance with the many public notices that were published. They varied the times of meetings because they wanted to make sure they were able to accommodate all groups that might want to be heard. There was seemingly little or no awareness within all of these schools that this was happening.

J. Chadbourne:

I would think that the council would go to the superintendents, superintendents to the principals, the principals to the teachers and say we want input and we will be in your schools during school hours so that the teachers and kids will be there.

J. Albers:

It seems serious to me that there was not the volunteering of the people, because there are a lot of knowledgeable teachers, that knew this was happening. At least there were one or two students down there.

- M. Russell: The other thing that gets in here is the little relationship between the professional knowledge that people have and their conception of themselves.
- D. Bennett: The public schools are notorious for not capitalizing on opportunities that exist. The reluctance to become involved in controversy is strong in current issues.
- J. Chadbourne: What this means to me is that the people who are going to populate school systems need to have the kinds of experiences which they need to carry into the schools on how to work with people. The only way you can do that, in my opinion, is massive mandatory inservice training programs. It seems to me that one of the present major priorities, then, ought to be preservice teacher education.
- J. Albers: Would you put a core requirement such as to be certified you would have to have X number of hours of environmental education?
- B. Stapp: There are some states, California, Indiana, and Montana, where for teachers to be certified they must take a course in environmental studies. Do you feel environmental education is important enough?
- M. Russell: I guess my inclination is to say of course it is important enough. But I don't think that it will make a good deal of difference. I know how little effect the addition of a mandatory course in racial issues has had in how the teachers act once they get back into the schools. What we are talking about is training organizers and putting them into public schools to do certain kinds of things which will ultimately improve the balance of the environment. The social forces which are currently in motion to define what the concern for the environment means in practice are the most privileged

sections of the society. These sectors are isolated in many ways to the pressing problems that the society faces. The consumer emphasis of many of the issues that are most popularly associated with environmental concern are potentially expansive enough to develop a broad-based coalition support.

- B. Stapp: Let's look at two different models. The California model says that teachers must take a course dealing with conservation to be certified. The University of Michigan has a multi-ethnic course list and teachers have to take three different courses from the list. To select a course that will be meaningful--does that exposure help?
- J. Albers: I think that Joe and I are talking about another kind of course. This is a course in how to involve the community.
- B. Stapp: Your thought is to develop a course to utilize the resources of the community. This would also help to build a support system.
- J. Chadbourne: I would call it "community service." That localizes it. In this case, you could have "out-of-school" coordinators who would build a mass relationship; then you need not depend on the inservice training of the teachers. This is a model that has worked very well. It would be a school-outside-of-a-school. It would be set up by specialists that have been trained.
- J. Albers: I think there should be less lip service paid to utilizing community resources. Schools should distribute forms requesting parents to sign up to see if they are willing to lecture in the school. I can't believe that there isn't one class in the school system that my kids are involved in that would be interested in hearing from an environmental reporter. But I just don't see community involvement in the schools

Comment by Bill Stapp:

The group was very diverse but did not experience any serious disagreements. Rather, ideas were reinforced and expanded as new perspectives emerged.

Two of the participants came from inner-city school systems and were able to articulate clearly the potential for "oppression" in such systems. This was to some extent new to the other participants, but all agreed that environmental education must strive to make schools more humane and cannot be effective in the context of autocratic institutions. The experience of the other participants in suburban and rural school systems and in non-school environmental education complemented the urban perspective. There was agreement that environmental education must establish linkages to community efforts and to alternative schools, but cannot abandon the great masses of students in traditional schools. To serve traditional schools, environmental education must be integrated into the school program, yet it must also be politically relevant and focus on the learner's immediate environment. A substantial amount of pessimism was expressed about the feasibility of accomplishing these goals despite institutional constraints.

The discussion was calm and the participants built effectively on each other's points. Because of mechanical problems, only half of the discussion was recorded on tape.

Environmental Education and the Concept of Values

By Thelma Wurzelbacher in consultation with project staff

Relevance and Importance

From arm chair philosophers to computer technocrats there is an internal program in people of beliefs, attitudes, values, and behaviors. Beliefs are cognitions. Groups of beliefs cluster toward a common object and collectively produce attitudes which, in turn, represent a behavioral disposition toward that object. Groups of attitudes converge to form values which produce behaviors (Swan, 1969). A given value is a functional construct which undergirds the consistency of individual actions.

Values accrue in the individual through home, school, and society. Ultimately, systems of values represent an enduring organization of beliefs and preferences by which a person chooses and acts along a continuum of priorities (Rescher, 1969).

When this basic theory is applied to the environmental movement and specifically to the role of environmental education two questions predominate. First, how do current environmental imperatives contradict entrenched social values and to what degree are those values fundamental to American traditions? Second, which values does environmental education describe, and therefore intend to teach?

Underlying both these questions are several assumptions or reasons why the concept of values is central to environmental education: (1) the teaching and learning of values is at least implicit in the theory and practice of public education in America, (2) the diagnosis of environmental problems is based on different underlying values, and (3) prescriptions for meeting environmental problems depend on select value outlooks. Precedents have been established which say education stabilizes the criteria for value judgments, and education manifests in some degree the value patterns of larger systems. It is naive to pretend teachers do not transmit values. The bigger issue involves which values and what methods?

Survey results from 150 environmentalists confirm the opinion that it is imperative for environmental educators to ascertain the economic, political, social, and environmental value system of this country and to investigate the influence of these cultural assumptions on environmental quality locally, nationally, and internationally. Admittedly, some current environmental imperatives contradict entrenched social values. Other diagnoses represent values of contending ideologies. If diagnosis is necessary and if solutions are to be outlined for environmental problems, then clarity about underlying values is essential.

The major values of American tradition which conflict with environmentalism are individualism, capitalism, growth and progress. Individualism for its own sake, induced consumptive

behaviors, and extreme humanism are literally anti-environmental. Underlying value structures need some shifting in the direction of stewardship and futuristic values. Frugality, equality, and resourcefulness would be more consistent and agreeable with environmentalism. In fact, environmental quality itself should be the most central and primary value of this society.

Serious environmentalists would link onto traditional values but use the same individualism and freedom which drove economic development of the past as a means to search for a radical environmental technology.

The survey respondents mentioned earlier reflect a new issue for environmental educators by a lack of unanimity on the priority for undermining established anti-environmental values and inculcating environmentally sound ones. Toffler, along with others, says "our problem is not values, but meta-values. Our problem is to help people clarify their value systems, whatever those value systems are, rather than imposing a preordained set of values on them." (Toffler, 1973). Nevertheless, the same respondents do agree that the core task of environmental education is to get people to understand interactions in the environment so sensitivity and commitment will be more likely to follow. It seems futile to work establishing and clarifying values of students unless those values are environmentally healthy. Environmental educators need to identify and promote as pluralistically as possible value sets and value goals.

Divergent and convergent viewpoints

Divergent viewpoints concerning values in environmental education arise primarily in degree and level of value change expected. One group may be satisfied with the establishment of a local ecology center while others see little hope for environmental progress without the dissolution of multinational, global-polluting corporations. In the educational domain some believe cognitive grasp of ecological concepts will produce the desired environmental sensitivity while others see productive change only in community action projects.

At a deeper level differences exist in trying to decide if environmental goals should be founded in personal or social values and if environmental responsibility resides at the individual or societal level. Change theorists who opt for individualsim place much emphasis on individual freedom and personal pursuit of achievement. Personal freedom of itself is not anti-environmental. Those who promulgate societal change see it as the aggregate of individual change (Coleman, 1971). A group-orientated outlook toward social change maintains that change rests on the collective strength of the community. It is the revolutionary aspects of a group with a goal which elicit change. True environmentalism is as revolutionary as other current social concerns. James Swan says the realization of social and environmental equality will

produce a value revolution which creates the necessary changes in political, economic, and social systems. (Swan, 1969).

In ancient times it was the responsibility of the state to provide the good life. Later, technology and capitalism assumed this role. With the Depression and the shattering of the concept of the perfectable man, Western society became doubtful about old ethical systems and social obligations. Today it is especially difficult to determine ethical values on the environmental scene, but a high quality of life is the right of every person and should be the first goal of environmentalism.

How does one determine which values are to be promoted and for whom? Any value system incurs costs and benefits on a differential basis to the different proponents and to the different people to which it applies. A new values group would press for social accountability, for a decline in nationalism, in personal, national, and economic independence. This could be replaced by an emphasis on internationalism and humanitarianism. In a system where maximum return is the primary goal, power and wealth would need a new expression in terms of an environmental ethic. Success could be changed so a person doesn't have to exploit resources and people to live and be successful. The glorified self-made person is antithetical to cooperative endeavors in an area where a viable commons is essential to control problems. Involved decision-making is more

important than governmental policies.

Participation in environmental change is certainly not universal. Benefits and costs are frequently interpreted as matters of value preference and not survival imperatives. Thus, in the presence of conflict between social and individual responsibility for environmental values and the cost/benefit assumptions of value implementation, environmentalists must deal with the strategies of value change.

Rescher emphasizes four ways: (1) change induced by information, (2) change through ideological and political influences, (3) change through erosion caused by boredom or disillusionment, and (4) economic and technological change due to demographic factors (Rescher, 1969). Some put little value on change through information. Similarly, ideological and political change has strong advocates and some status quo thinkers.

In the immediate past the movement dealt largely with consensus. The educational processes were informational and voluntary change was encouraged through participation strategies at the level of the individual consumer (Morrison, 1971). As the movement matures power strategies and conflict approaches are being utilized to change large scale political and legal anti-environmentalism. For example, several issue-specific organizations might mobilize to pressure managements against advertisement of anti-environmental products.

Along with voluntary, commercial and governmental organizations educational institutions have a niche and unique role in these power strategies particularly as they apply to value change. A number of options exist regarding the role of the environmental educator in value change. Some are traditional. Some represent a new wave of educational activism.

Robin Williams states that new values which education transmits are fractional compared with the traditions that are imparted. People exaggerate the extent of really basic change (Williams, 1965 and Coleman, 1969). Williams maintains the dominant value themes in American society deal with active mastery, with external things to be manipulated, with orderliness, and horizontal interpersonal relationships. It's inevitable from the past, but a weakness of the present, that environmental education models have no definite agenda of value priorities. Values beyond white, middle class, protestant spheres should be apparent in educational aims, in specific content to be taught, and in the model of the environmentally alert citizen. Common value goals must be established without delay.

Kelman presents two general views on the topic. First, the enhancement of freedom of choice is the fundamental value and manipulation of behavior is a violation of essential humanity. This is the case whether the manipulation is based on punishment or positive reinforcement and regardless of the

good of the cause. The second view is that effective behavior change involves some degree of manipulation and control and the implicit imposition of the change agent's values on the client or person he is influencing (Kelman, 1968).

In referring to general social behavioral studies Kelman says that difference in degree and kind of manipulation is based on (1) the extent to which manipulation allows or enhances individual freedom, (2) the extent to which the influenced and those influencing enjoy reciprocal relationships, and (3) the extent to which a situation is oriented toward the welfare of the influenced. Contained in this are the decision points on just where freedom is enhanced, where reciprocity occurs, and whose welfare is served by specific environmental decisions.

In applying this to environmental education it should be noted that high educational status is an earmark of the environmentalists as a class and that presumably many are educators per se. The structural base is available from students and teachers. If learners can formalize their interest and environmental pursuits by means of value studies, clarification processes, and problem-solving experiences they will be able to make decisions more autonomously. Hopefully, the clientele are pro-environmental and the merits of clarification would be positive. Manipulation would be minimum and would be no different from that which generally occurs in most educational situations.

In fact, institutionalized learning of value conflict options and strategies in environmental realms would provide the long term political influence or "structural conduciveness" (Smelser, 1963) for extending environmental reforms into the future and for rapid adjustment to environmental crises where they occur. As the movement changes from consensus to conflict it seems Kelman's reference to manipulation which embraces freedom should give rise to a student population motivated in classroom circumstances, equipped with transferable skills, clear in value orientation, and able to actively promote environmental reform. This group is surely the influenced generation who are keenly aware that much of the environmental crisis applies to a time period in which they have protracted investment.

In summary, a number of affirmations are suggested for the field of environmental education and for those concerned with value issues: (1) environmental educators must look at values in cultural, social and economic contexts; (2) changing anti-environmental values and inculcating sound ones is part of the commitment of an environmental educator, (3) American values to be altered for the environmentally aware citizen are primarily raw individualism, capitalism and growth-mania; values to be fostered are quality environment, social accountability, and futurism; (4) strategies of value change begin on consensus basis but mature to conflict

and power struggles; revolutionary mind sets are quite beneficial when dealing with object-goals which are bound in the very being of people; (5) contracts of reciprocity are for the time being one way of respecting the aims of the environmental educator and the needs and dignity of the educated; corresponding advantages and privileges are shared by the agent and subject of value change; and (7) the aim of the environmental education movement today is to institutionalize awareness, clarify its theory, and suggest value practices by which an environmentally informed citizen can get the job done.

Key Questions

1. Is it within the domain of the environmental educator to work toward replacing anti-environmental values with beneficial values?

Given the fact that educators work within a cultural system and traditional values are perpetuated in schools, the environmental educator would necessarily have to define both types of value domains and formulate some sort of methodology for learning. Given the diversity of socio-economic audiences within school and community systems, the environmentalist will need to decide environmental values and methodological format appropriate to each.

2. What manner of dealing with values should environmental educators emphasize?

If value education is to be a part of environmental education, and it seems that it must, do environmentalists concentrate on a particular method of handling values--moralizing, modeling, value clarification, or outright manipulation? Are the methods to be integrated? Is one more justified than another in the traditional school system?

3. What priority should educators give to value clarification as it relates to community problem-solving approaches?

Building upon theoretical constructs and traditional learning models, community-action programs would be the likely vehicle for transmitting environmental values to the real world. Is it practical, ethical, and politically feasible in the public education sector to lead students into environmental activism? Is potential antagonism from the civic and industrial community a factor which would increase the alienation experienced by younger generations?

4. How important to environmental education is the resolution of conflicting values which are involved in the decision-making process on environmental issues?

Given that conflicts are inherent to most educational and social change processes, environmental educators seek no exemption. Reconciliation and singleness of purpose about environmental goals would help the movement spread its positive effects and long term benefits.

Related Questions

5. How, why, and who will define "environmental ethic?" Is it premature, unrealistic, or applicable to all environmental clientele in multiple geographic and socio-economic regions? Can individual values be used effectively in developing an earth ethic?

The purpose of a statement in environmental ethics should be to concretize goals, anticipate value changes and behavior modifications, and serve as a baseline for environmental strategies. Economic values have reigned supreme for so long that it will take quite a turnabout to resurrect non-economic goals.

6. Does the environmentalist present this ethic to the social and professional community alone or in liaison with them?

As forerunners of a righteous and acceptable cause environmental educators need to weigh the merit of proclaiming an ethic from a relatively subjective view versus a collaborative statement. The collaborating groups would conceivably have resistance to the ethic; the environmental groups could easily be narrow or too self-righteous. Since environmentalism should service the entire community, the community will need to embrace the same goals.

7. How are value concerns going to be institutionalized in the setting of environmentalism?

It would appear that the values question as it relates to environmental education might be just another pedagogical experiment like reading by color or pass fail systems. Are educational structures like curriculum requirements and problem-solving models the only means for institutionalizing environmental value issues on the long term?

Annotated Bibliography

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A frequent reference by those dealing with value research. A more general approach with significant applicability to value education and eventually to environmental values and valuing.

2. Milton Rokeach. The Nature of Human Values. New York: The Free Press, 1973.

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3. Robin M. Williams. "Values and Modern Education in the U.S.," in Values in America. Donald N. Barrett, editor. Notre Dame: University of Notre Dame Press, 1963, pp. 17-46.

A significant conference report done at an early date when value groundwork was being laid.

II. Value Change

1. Conrad M. Arensberg and Arthur H. Niehoff. Introducing Social Change. Chicago: Aldine Press, 1964.

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3. James A. Coleman. "Conflicting Theories of Social Change," American Behavioral Scientist. 14 May-June, 1971, pp. 633-650.

An exposition of four theories of directed change as the basis for effective strategies.

4. Clyde Kluckhohn. "Values and Value-Orientations in the Theory of Action," in Toward a General Theory of Action, Talcott Parsons and Edward Shils, editors. Cambridge: Harvard University Press, 1962, pp. 388-433.

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III. Values and Education

1. Rex R. Campbell and Jerry L. Wade. "Value Systems," in Society and Environment: The Coming Collision. Boston: Allyn and Beacon, Inc., 1972, pp. 337-345.

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2. Clifford E. Knapp. "Attitudes and Values in Environmental Education," The Journal of Environmental Education. 4 Summer, 1972, 26-29.

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3. George Lowe. "Value Systems--Ecological Imperatives," in Man and Environment. Robert H. McCabe and R. F. Mines, editors. Englewood Cliffs, N.J.: Prentice-Hall, Inc. 1972, pp. 56-73.

A serious-minded chapter written in simple language which deals with a re-examination of values, the development of American values, and the elements related to environmental concerns.

4. James Swan. "Formation of Environmental Values: A Social Awareness," in Processes for a Quality Environment. Robert S. Cook and George T. O'Hearn, editors. Green Bay: The University of Wisconsin, 1971.

A clear explanation of social values and environmentalism. Perceptive emphasis given to ideas of environmental dissonance and principles and recommendations for environmental education related to values.

5. Alvin Toffler. From a speech given at the N.J.E.A. Conference at Atlantic City, November 16, 1973.

Excerpt dealing with reality testing of classroom generalizations, public education and values, value system clarification.

Interview Questions:

1. In general, what reactions do you have regarding the working paper on environmental education and the concept of values? What were some of the strengths and weaknesses of this paper?
2. Who decides what values should be taught in environmental education and to whose benefit? What are good values?
3. Is the blatant manipulation, as in behavioral modification, of one's values as opposed to value clarification, modeling, moralizing the way and manner environmental education should deal with the questions of values?
4. Should we assist students in value clarification processes and not impose on them our own values or anyone else's values?
5. Can schools present materials to individuals in a value-free and objective framework? If not, why? Should we?
6. Is it ethical in the public education sector to lead students into environmental activism? If not, why? Is it ethical not to lead students into environmental activism for change? Would you personally lead students to activism? How far will you go in acting upon your values for change?
7. Is change possible without a change in basic values?
8. What kind of intra-personal valuing activities should groups engage in before participating in community activities? Are such activities important? Why?
9. Are schools more political rather than educational institutions? If so, how does it relate to values and environmental education?
10. In valuing the environment we must start with ourselves: One place to start is by having students and teachers change their values toward one another. Therefore, should students and teachers be involved in decision-making as to the hiring and firing, evaluating of teachers? If you don't agree, why?
11. Given the state of environmental education, what key values of our culture are brought into question?
12. Do human values transcend the values we hold toward property, plant and animal species? If yes, should they?
13. Are you clear on your own values? How do they relate to this discussion?

Interview Participants:

Rod Allen
Bill Bryan
Bunyan Bryant
Alan McGowan
George Moore
Chuck Roth
Doris Welcher
Themla Wurzelbacher

- T. Wurzelbacher: We might want to start with the question of who decides what values should be taught.
- A. McGowan: Implicit in that is a feeling, it seems to me, that what is wrong in environmental education is the values that people in the United States hold. Therefore, what one needs to do to solve environmental problems is change the values of people. Is that a correct assumption?
- T. Wurzelbacher: It's one of the assumptions I know I made in the paper.
- A. McGowan: I fundamentally disagree with that. Maybe that means this is not where I belong. At some point I think that issue has to be discussed.
- R. Allen: What would be your position? What other assumptions to you operate from?
- A. McGowan: As to the environmental problem? I think the environmental problem is deeply rooted in the political, economic and social system in which we live. I think that the values which the people in this country hold are pretty much all right. I don't want to change those values and secondly, I don't think it is the job of the school system to change these ideals of people. The environmental problem is a systemic problem and in order to change systemic problems you change the system, not people's values.

B. Bryan:

You say that people's values are OK. Can you give me some specifics?

A. McGowan:

I think that what people want is an adequate income for themselves and their family, adequate safeguards that they are not going to get robbed at night, a good education for their kids and other people.

R. Allen:

I heard Barry Commoner speak to this [that the values of Americans are basically good] and he claims that from his experience, if you simply give people the facts, you will hit within these people a basic moral fibre that is innately good. They will try and will know to do the right thing. The problem is that they are institutionally trapped, like the farmer who has to fertilize his field in order to survive. You can give him information and he does fertilize, knowing that he is going to pollute the water downstream. The problem is an institutional problem and these people are trapped and they can't do otherwise and still survive. So you have to change the institutional arrangements. The fallacy in that argument is that the people at the top are also trapped in their institutional roles. The president of General Motors--the demands placed on him and others; they are equally trapped as individuals. I share your concern about public schools dealing with values, especially given the people we have historically employed to work in public schools. I think the public schools can, if sensitive people are employed, deal with students and help them figure out what they value, what their life goals are, how they think life ought to be lived. I see that as a long-term process--finding the right principles, the right values. That's a task of public education, that's not to

impose any particular value or value system on students unless it is a procedural value, something like "knowledge is better than ignorance." Basically the public school educator has to affirm the student's right to value what he or she thinks appropriate to value.

C. Roth:

I agree with that. I think that values are important. I disagree with Alan in that I think it's one thing when we think of values as wordage and another thing when we are in a conflict situation. Which value do we give lip service to? We are going to give more concern when we are forced to make choices. We have to develop in the schools the concept of valuing. What the kids end up doing is looking at how they arrived there and the various processes, whether they have thought the thing through so that they come to their values on their own and not just having accepted them accidentally out of their environment. I don't think that the teacher can be value-free. I think that the kids can take their position by examining the way the teacher arrived at those values, not just do it because the teacher says it. By a process of valuing, we can look at the facts that come out of our environment and reflect them against our experience and see where we are going.

T. Wurzelbacher:

Let's see if I understand. As I see it, in the paper I am saying put it into the schools and do it our way, let's say as environmentalists; and you two are saying let's teach the valuing process. Alan, I think you are saying let's forget the whole deal - let's look at the institutions and the social and economic aspects of those institutions and then we'll get the change that we need.

A. McGowan:

That is essentially correct. I think it is correct to say that schools teach

values, they do it all the time. I don't say that it is correct to do so but they do. The values they teach are derived from societal values--those things that society has viewed as being valuable. One of the values that should be taught in schools, if you insist on teaching values, is at least questioning those values which are being taught, because most of the changes in society have been brought about by those people who say that the values being taught are bunk, and ought to be thrown out. That is not the issue here--the issue here is what is valuable in environmental education. Why are we all so concerned and involved with environmental education? Speaking personally, I am not so terribly interested in clean water. I think it is nice if the streams were clean but if I were living in a town in New Hampshire and were faced with the choice of a clean stream or a job, you know which choice I would make. The value of environmental education is that it gives you an insight into the workings of society--it tells you what things go on in that society. The value of environmental education is to allow students to figure out how that system works, or doesn't work, as the case may be, and if you insist on focusing on values, you miss the whole thing.

D. Welcher:

The problem is that many times the educator brings to the system his own set of values and does not allow the student the opportunity to make choices, to question. The system of values is, more likely than not, traditional. The student comes away to continue to perpetuate what these values are. It is very rare that an educator comes and presents a different set of values, different sets of living styles, different sets of modes of changing, and lets them choose which set they wish to identify with. It is more a kind of

regurgitation of what is being taught. You have very little feedback, very little responsiveness. If I veer away from what is being taught, the grades go down and if I yell against it, I am a revolutionary, brought to the office because my value system happens to be contrary to what is being taught. What's a good value? What's a good value from where I come from may be very alien to what I have been taught. I happen to see very many strata from very oppressed populations and I happen to be able to see where people can be activated to determine their own fate and to redefine what is successful for them. If I tell them that they are ignorant, that they are less intelligent, that their genes are different, they are sicker, they are more diseased--and they incorporate these values, they see themselves as helpless. Of course, I am being a devil in my presentation, but this is very real.

A. McGowan:

But that is in fact what is taught in many schools.

D. Welcher:

Then what happens is that the people believe this of themselves, people outside of this area believe this about these people and the cycle is perpetuated.

A. McGowan:

I agree with much of what you say but I don't think it has much to do with values. I don't think that that process should focus on values but I think that what you are saying is that students ought to be allowed to determine their own direction and do the kinds of things we are trying to teach them to do--problem solving, investigatory skills. That's fine, that requires a change in the school system. You are not talking about values, you are talking about a systemic change.

C. Roth:

When the child challenges the teacher he is put down. He learns by the third grade

that learning is the last thing that is rewarded--what's rewarded is doing what the teacher wants you to do. The institution is a system of values and those values must be questioned. The teacher has to question also, what do I value, before the system will change.

A. McGowan:

I don't think it is a question of the teacher's values that are operating, but the behavior of a teacher which is modified by the system in which that person lives.

D. Welcher:

That is how she perceives the system.

A. McGowan:

By changing the teacher's values, you are not going to do a thing. Teachers have good values. What bad values in teachers do you want to change?

D. Welcher:

If the system has a different set of values, then the people who work within that system hate those values. He is saying change the system.

A. McGowan:

Let me make this quite clear. This has happened to my wife, and I am sure to lots of other people, you have all kinds of ideals, you want to operate in a classroom and after three months it becomes a matter of survival. It's getting a paycheck or not getting a paycheck--then you are in a conflict situation and that value stands out. I don't think that's a bad value and I would fight anyone who would want to change that. It's a survival value and I don't think that value ought to be changed.

C. Roth:

Nobody said it should.

A. McGowan:

But in order to change the system, you force the person into a conflict where that value comes out. The problem is not changing the value of the teacher.

B. Bryan:

There are some issues that have to do with survival on a day-by-day basis. There is some slippage that means that teachers can be confronted. Peter Sandman,

for instance, used to say, I have some skills, I have some technology and I am willing to share those skills with anybody. But then I pressed him--it was questionable if he wanted to share his skills with everybody. Suppose he helped out a student who was studying journalism, and ten years down the road, the student started writing anti-semitic articles. The question for me is I don't know if I want to become involved in the whole value clarification process.

R. Allen: I think you have to do more than just clarify and confirm what is. What worries me about your position, Al, is that what you have outlined for the institution is essentially sketched out in Adolf Eichmann's defense.

A. McGowan: Would you care to elaborate on that before I hit you!

R. Allen: All Eichmann was doing was compromising because he had to survive in that system.

A. McGowan: That's correct and there are people who are not blameless. Coming back to an earlier point--the president of General Motors is not trapped in the system in the same way that a factory worker in the GM plant is.

R. Allen: I would agree with that.

A. McGowan: The objective fact is that he is not trapped in the system in the same way that a factor worker is. That is a demonstrable fact--it is not a question of self-perception. The job of environmental educators is really no more and no less than the job of all educators, which is to teach people to get at the facts.

B. Bryant: What kind of facts?

A. McGowan: There is only one kind of fact--fact.

- B. Bryant: No, I could say that power defines reality and power defines fact. That's what the whole problem of the black studies program in schools is all about, because the school system has defined history in terms of white western culture. That was fact and nothing else really counted.
- A. McGowan: You are talking about two different things. One, you are talking about how the power structure defines fact, and the other issue is what is fact? It is true that the establishment in this country and many other countries has defined fact as certain things. In many cases they were wrong. In a recent case that I was involved in, the Atomic Energy Commission tried to define fact as a certain thing. Knowledge is power and it is the job of the educator to tell people to get at what the real facts are.
- B. Bryant: I would like to know how you find a so-called objective fact. How do you define that?
- T. Wurzelbacher: You are replacing value, in a sense, with fact. I think you are saying that if you give people information, they will make the correct decision. I don't think that is a strong premise at all.
- A. McGowan: I happen to believe in that. Do you happen to believe other than that? If you don't, then you don't believe in democracy because that is the basis of a democracy.
- C. Roth: You smoke, right?
- A. McGowan: Every once in a while.
- C. Roth: You know the facts but you value something else more. But you impose that smoking on me and I have the facts and I object to it. You impose your value for smoking on me.
- A. McGowan: By smoking in your presence? If you ask me not to smoke....It is true that there

are many shady areas--many areas which are ill defined and where a constant struggle is still going on in which people's value systems are very much a part of the whole research--that's true in any kind of research. But that is a different issue from the idea that there are things that one can determine, that one can get at what we call the truth. I don't think you are going to change anything in this country or any other country until people have some kind of information about what is going on in society.

B. Bryant:

I have trouble dealing with that just because it seems to me that facts are partisan.

A. McGowan:

They can only be used in partisan kinds of ways when one group knows what another group does not know. If you take that information away and it is equally shared, then you can deal with it.

C. Roth:

Different groups give different valence to the same facts--that is where your value conflicts come. One of the ways you deal with value conflicts is to deal with the data and see where we take the same fact and you give it a different value. I was trained as a scientist and still don't believe that just because you give people all the information, then it is a fact that they will act properly based on that fact.

R. Allen:

That is one of the problems with schools that are trying to deal with value in isolation from meaning. These two things are linked. It is a fact that perception is keyed and governed by contextual meaning. You can call it as Florence Kluckhohn did, "orientation," but the facts are always set and processed psychologically.

T. Wurzelbacher:

Would you put environmental education then in the context of doing things in a life situation?

R. Allen:

Yes and I would want students to act on their values. But I don't see myself as a public educator indicating which way they ought to value or to act. That's up to the students to decide, as individuals or in their own group. Outside the realm of public education say, working in a community group, I might well be an advocate of a particular set of values and policies. But in public schools you can't separate the value dimension from the meaning dimension in students' inquiry and search

C. Roth:

One of the most important points about value judgements that is neglected is that you ask the kids to do some predictive work--if you take action based on this value judgement, what are the likely consequences? This tends to be overlooked with an overemphasis on one school of value education--the Simon school which is clarification for clarification's sake. This doesn't do as environmentalists do, which is getting people to put it into the context of what are the consequences of actions and how are the actions related to the values that you hold. You are giving the people this way a strategy for looking at what is going to happen

R. Allen:

Some students at their stage of moral development are going to try to identify with things I do. That fulfills certain kinds of needs they have. It's another thing to make it my educational objective--to make the students swing to my point of view. The students who model after me are mistakenly trying to do that identification stuff. Students should be making value judgments and acting out these value judgments. What teachers need are some questions to ask of these students to find out how they analyze their positions and see how it relates to the implications

of what they believe in a social setting.

B. Bryant: Even those kinds of questions are value laden.

R. Allen: Students should develop their own questions, their own sense of being, rather than being socialized uncritically into a world-view the way they are now, or absorbing things different places uncritically and holding them inconsistently which is very dissatisfying.

C. Roth: If you do this you are putting a high value on freedom, and in our society man is not free, he is trapped in society. This approach gives more freedom--you're never going to have true freedom.

R. Allen: There you are dealing with the Latin root for the word religion--"to bind together." But the Latin root for the word education means "to bring forth," for reflection, thought and take it from there. As an educator, my job is to bring forth different kinds of questions, positions, world-views, and commitments to life goals and lifestyles.

B. Bryant: That might be very detrimental

A. McGowan: Could I get back to a question that I think is key? I think that you said that in our society or in any society that you can conceive of, people do not act correctly if they have all the information.

C. Roth: I said that just because you give people the right facts does not mean

A. McGowan: What are the alternatives? What would you pose as an answer?

C. Roth: The facts are related to the things you value. These are belief systems and they are not necessarily based on rational fact.

Large numbers of societies today exist on non-rational belief systems. They function day-to-day and have done so for hundreds of years, and have struck some sort of balance with their environment by which they exist. Nature's way is any way that works and somehow this system is working for those people. Missionaries are a good example of this.

- A. McGowan: You are getting away from the question. If you don't feel that people necessarily act correctly, if they have all the facts, then there has to be an alternative. Do you feel that the job of environmental education is to change belief systems? I am asking what is the job of environmental education.
- C. Roth: To examine both facts and values.
- T. Wurzelbacher: To what degree do we need to work on the change aspect?
- A. McGowan: I think that is the most potentially dangerous educational concept I have heard in a long time.
- C. Roth: If you let people examine things, then you have the situation where they come up with positions that are antithetical to yours.
- A. McGowan: There is no way that you can give people the opportunity to examine values in a value-free context. What you are doing is developing a very highly sophisticated Skinner box by which you can manipulate students right from the day they walk into the classroom to the day they walk out.
- D. Welcher: That is what we are doing but we are doing it very often to our own advantage. We are not being sensitive or admitting it. Let's look at it and see how it is affecting the whole environmental situation.

Let's see who is benefiting from what we are doing. We can't escape it--we all operate on our own givens. Now, evaluate it. Is it destroying the system, are we oppressing certain groups to our own advantage? Are we having the goodies of life at the expense of someone else? Why do we tenaciously hold onto these things?

A. McGowan:

Implicit in that is that there is an implicit objective reality that you can examine. It is not question of values.

C. Roth:

These are factory models, set up to teach you that the values are to sit down and shut up, do your work and be on time. That's far more important than the content of history, the content of math--that is what is taught in schools, no matter what the rest of the curriculum is.

A. McGowan:

If you are not going to polarize it, what you have just said is that the solution is not to teach a different set of values, it is to teach facts.

B. Bryant:

I think facts are partisan.

D. Welcher:

Let me use an example. The first time I went to North Carolina, I went into the john and somebody pushed me out of it and told me to read the sign and I could not read. Somebody came out and read it for me and it said "white ladies" and they pointed me to another sign that said "colored women." The sign was right out there. When I went back to Illinois there were no signs on the door but I knew where I could go. One value was right out there and everyone there knew it, the other one was kind of implicit, but all the people knew it and kids walked around in it and it was sort of unwritten. I don't know which is better--the blatant or the kind of implied. It was the same system, the same things were happening. You could not go in but there were just different codes. I felt then, why didn't

they tell me? In fact, I was very proud that North Carolina had told me, these others had deceived me.

A. McGowan: I am a little bit disturbed by that-- you seem to be saying that it is all right to be prejudiced as long as you display it.

D. Welcher: What I am saying is how it operates on kids. I can either fight it or live with it, but at least I will know how to deal with it, whereas when it is not spelled out you may be operating within something quite different, not knowing.

A. McGowan: There is nothing wrong and everything right with a teacher who exposes his or her values which he or she thinks are important in life. I think it is a total cop-out, a sham, if you say you are not interested in influencing the children in your class. I think that a person who says all I am interested in doing is clarifying values is ridiculous.

D. Welcher: That's just a part of it.

A. McGowan: The counter to that is that one must say that the school system and the teachers must teach values because if you are not going to be neutral about values, then you are going to teach values. Then you are forced to define the values you are going to teach and I don't think that is the job of environmental education. I don't think that a group of people have the right to define a set of values that are to be taught in the public schools.

C. Roth: Is pluralism a value acceptable in our society?

R. Allen: I really don't follow the point you [McGowan] are trying to make. You are saying we really don't want the kids to be racist but what you have done is constructed a value.

- A. McGowan: The way to get at that is to teach facts.
- B. Bryant: The school teaches racism. Then I have a right to teach anti-racism.
- A. McGowan: To do that you can teach facts
- B. Bryant: Suppose a kid is reading some very heavy material and he talks to other kids about ripping off certain ethnic groups, their ethnicity. Do you become an active participant in trying to change his values? The same kind of issues go in terms of that community activism stuff--do you become involved in community action projects?
- C. Roth: In terms of the model that I use I challenge them as to where they get their various facts and criteria statements. I will challenge them on their facts, I will challenge them on their criteria. Sometimes I will be acting as devil's advocate to see if they can defend the position they have arrived at.
- R. Allen: When you have done all that and it comes down to the nitty gritty, what would you do? There's a social control function that some authority has to be imposed to protect the interests of students. I would affirm the right of a youngster to make value decisions in a classroom that were somewhat less than democratic and pluralistic, but I would definitely interfere with his beating up a child of a different race in the playground. They are different functions and I have different responsibilities there.
- B. Bryant: Responsibilities to yourself or to whom?
- R. Allen: To the institution that receives students who are forced to go there. The social control function is different.

- B. Bryant: I see that as all being the same.
- R. Allen: I don't. The educational function dealing with students, values, systems and meaning is quite different from the social control function and there are special aspects of the social control function because students are forced to go there.
- B. Bryant: Even now we are talking about values.
- R. Allen: Sure, I don't think you can separate my behavior from the value orientation I have--the way I think life ought to be lived. It is impossible to do that. This is also tied to my world-view--the way I make meaning of what is going on around me. It is a cognitive thing. Most of the discussions by the leading theoreticians of value development in our society--Simon and his boys--deal simply with value judgments and the lowest level of awareness. Lawrence Kourberg, who is the second authority in terms of popularity, talks more about developing value reasoning. I say we have to go beyond that to see what the value reasons add up to, for the way life ought to be lived, to see what is the ultimate concern for which you live your life and that is also tied to your world-view.
- B. Bryant: The thing I am saying is that I am value-centric and not value-objective. The kind of thing I believe in--that research is partisan, fact is partisan--I am going to be engaged in those kinds of things, those kinds of answers. I think that is what the whole game is all about--that is the kind of game the energy companies are putting on and they have all the information and all the research.
- A. McGowan: The only reason they can say that is because they have the information other people don't have. The way we can fight them is with information, and that is the only way we can fight them.

- B. Bryant: The only thing I am saying is that information is partisan.
- A. McGowan: Only because they have it and you don't
[The discussion then turned to the role of power in social change, and the relationship of information to power. Exploitation of Native Americans was discussed as an example of power versus natural processes.]
- B. Bryan: I was very interested that a lot of issues were brought up and I think there are some very fundamental differences here in this room. This was very visible here and this should be visible to the whole group. I can't believe that I have such differences and in particular, I just can't understand where you are, Al. I just can't see that.
- A. McGowan: Can't see what?
- B. Bryan: I really don't understand your whole thing about facts. I guess I have been interpreting it as partisan fact versus value-free fact, and it seems you come down to value-free fact and Bunyan or I would come down on there is no such thing--that's really partisan facts that we are dealing with. You don't think you ought to teach values and I think that is a cop-out.
- A. McGowan: You are asking two questions.
- B. Bryan: No, I am not asking two questions, I am making some observations on how I am perceiving this. I am not asking any questions--maybe there were some questions being asked in your mind.
- A. McGowan: You made a statement that you didn't know where I was at. That is one statement. The second statement is that you disagree with where I am at. If you don't understand where I am at, I would like to clarify that. But you simply

stated that you disagreed with my statement. That is fine and I will not respond to that. But those are two statements--they are not the same thing and that is a fact.

B. Bryan:

Is that a fact?

T. Wurzelbacher:

I think that Bill is presenting--when he said I don't know where you are, he is simply saying I don't get that, but this is where I am.

A. McGowan:

If someone says I don't understand where you're at, I try to respond to that.

T. Wurzelbacher:

I think that you have done that.

B. Bryan:

I disagree. It seems that there are some real contradictions in terms of what you are saying.

A. McGowan:

That may be so, and we could sit down and go around again but I thought you were saying a different thing, that you didn't understand where I was at.

D. Welcher:

There wasn't quite a fact because there was still disagreement in terms of interpreting. . . .

Comment by Bunyan Bryant:

The discussion generated a great deal of enthusiasm and excitement. All agreed that values were taught in schools, but there was disagreement as to whether values should be taught in schools, and if so, what values. There was also disagreement as to whether values were at the root of the environmental crisis. One person in particular argued strongly that the values of the American people were fine, that what was needed was not value change, but institutional change. Others felt that people make up institutions and values must be changed, though perhaps not through schools.

Disagreement surfaced also around the partisan aspects of "objective facts." Disagreements as to the value-freeness of "data" led to many other kinds of disagreements--over the need for control in determining research design and the use of research results; over the usefulness of information to get people to change their behavior, etc. The discussion on these issues was very diverse, including an educator who believed in values clarification but denied that values clarification itself was value-latent; a scientist who felt that facts were neutral; an environmentalist who saw facts as partisan; and another environmentalist who was willing to advocate only certain values as implicit in environmental education.

Because the research assistant who had written the pre-conference paper was present and chaired the discussion at the request of the participants, the interviewer felt free to participate himself, in contrast to his "interviewer" role in the morning session.

Local Versus Global Perspectives in Environmental Education

By William Hansen in consultation with project staff

The relevance of this issue for environmental education hinges on the word perspective. It is only in recent history, perhaps dating from the time of Copernicus, that the significance of this word has been thrust upon the awareness of man. It is now generally accepted that perspective not only indicates how one sees the world, but also what evidence will be attended to and what conclusions will be drawn from it.

The perspectives "local" and "global" are more conceptual than geographical. The concept "local" refers to the immediate in time and space; "global" refers to the construct into which the parts must find their fit, in temporal and spacial abstractions. The most recent attempt of man to deal with the local and global is through the mega-concepts of general systems theory.

This issue confronts environmental education with one of its deepest challenges: how to conceptualize the world so that the conflict between the one and the many, the near and the distant, the short range and the long range, the familiar and the strange can be at least recognized and perhaps reconciled; in short, how to discover an ecology of human relations based on social justice which will guarantee

equal access to wealth, resources, knowledge, health and cultural identity in order that human beings can live at peace with one another and the rest of nature.

The principles of ecology make the acceptance of this challenge imperative. It leads us to pursue the ancient quest for "unity in diversity."

Conceptual Background

Localism, by which is meant the manner of viewing the environment from a perspective limited by space and time, and globalism, which refers here to conceiving of the global environment as a system in which local components are integrated, are presented, in the phrasing of this issue, as existing in a state of polarity. The local is posed against the "global" as if the two perspectives were distinct, separate, and even opposite. While this dualistic approach has been customary in the past, it is no longer adequate in the light of problems such as the following, which currently surround the environmental aspects of this issue.

1. Globalism is often equated with "internationalism", denoting isolated parts, rather than with the concept of a holistic system. David King in his book International Education For Spaceship Earth¹ asserts, "No matter how much lip-service we pay to the idea of a global society, most of us still

look at the world--and teach our students to look at it--as a patchwork quilt of different pieces belonging to different groups." And despite many fine insights in the book, King's concluding model for teaching international education still leaves the local and the global divided. "Within it we can study at any scale: that of the real world of the individual's everyday life at one extreme, and that of the abstract planetary world at the other."

2. A bi-polar model tends to intensify the separation of local and global concerns due to differences in time and space perspectives. This kind of separation of the local from the global can have disastrous results as Meadows, et al.,² point out, "There are many examples of a person striving with all his might to solve some immediate, local problem, only to find his efforts defeated by events occurring in a larger context.... Indeed there is increasing concern today that most personal and national objectives may ultimately be frustrated by long-term, global trends...."
3. Local diagnoses of environmental problems can remain uncorrected by a global diagnosis because they are viewed as independent of each other.

4. Global environmental programs often lack local support because local entities believe themselves to be independent of the larger system.

These kinds of problems illustrate that what is clearly needed is a conceptual model for globalism emphasizing the unity of the local and global perspectives within globalism, rather than the dichotomy. Localism and globalism express different aspects and serve different functions, but they share a common existence in environmental events and phenomena and should not be thought of as capable of separate existence.

The concept of complementarity, borrowed from the field of atomic physics, provides us with a possible conceptual model. It proposes that two phenomena or functions can exist simultaneously in a common field in a "both and" rather than an "either or" relationship. This model allows us to think of the local and the global as not only complementing each other, as even a bi-polar model would do, but as existing interfused in the same events.

Employing the concept of complementarity helps to convey the understanding that globalism includes both the local and the global aspects of all events of consequence to the environment while, at the same time, granting different functions to the local and global perspectives: primarily education, action, and implementation to the local, and

primarily analysis and diagnosis of actions and problems to the global. A conceptual model which unifies rather than separates the two perspectives enables both to perform more capably. Local problems are no longer seen as isolated from the larger global system; there is no logical alternative to seeing them also as global problems and to devising solutions to them from within the global system. Implicit in global solutions would be the goal of equality; resource use and environmental quality would be shared among peoples over space and time.

The interfusion of the local and the global in world events is evidenced in many developments of modern times. First, the science of ecology has revealed that the biosystem functions through the interaction of all of its parts, precluding the ultimate separation of "local" from "global". Second, increasing interaction among the nations of the world makes independence and isolation unrealistic while also uniting local areas into a global system. Third, new economic interdependence is emerging from the expansion of the multinational corporations which defy traditional boundaries and national differences in pursuit of profit on a world market. Fourth, there is a rising bond of affinity among the world's youth, particularly in urban centers, which bridges traditional differences. Fifth, the nations of the world have made it known that it is no longer possible to exclude any people anywhere from the consciousness of all people everywhere.

Ward and Dubos cite a consensus among scholars of various disciplines around a unifying concept of globalism³ by pointing out in their book Only One Earth , that until recently,

"...we have lacked a wider rationale of unity. Our prophets have sought it. Our poets have dreamed it. But it is only in our own day that astronomers, physicists, geologists, chemists, biologists, anthropologists, ethnologists, and archaeologists have all combined in a single witness of advanced science to tell us that, in every alphabet of our being, we do indeed belong to a single system, powered by a single energy, manifesting a fundamental unity under all its variations, depending for its survival on the balance and health of the total system."

Many of the real issues behind environmental problems are only brought into focus as local conditions are diagnosed from a global perspective. For example, the problem of overpopulation is often diagnosed only from a local perspective with birth control programs prescribed as the solution. However, from a global perspective, it is often found that high birth rates are a symptom of economic and social impoverishment due to exclusion from sharing in the earth's wealth and resources. This would call for programs to eliminate poverty as well as limit births.

Economic development presents a similar example of failure to apply a global diagnosis. From the local perspective of developed countries, economic growth seems to be largely beneficial since its costs are mainly externalized,

deferred in time and dispersed in space. On this basis it is advocated for non-industrialized nations. However, since the wealthier nations do not want to give up the benefits of economic growth, development is typically offered in a form, such as foreign investment, which will also enrich the developed nation, in the hopes that the poorer nation will benefit from the so called "trickle down theory" of economic development. Such a plan, however, contains such serious flaws as, 1) it increases overall industrial stress on the environment, and 2) it tends to leave the developing country economically dependent. However, if the global consequences of local development are considered, any plan for development would have to include the costs to the developed country (and the total ecosystem) of additional industrial pollution and the cost to the developing country (and the global political system) of economic dependency. Global analysis would deem more viable transferring full participation in the global system to all nations.

Another example is found in the use of persistent chemicals in agriculture and industry. A local perspective will justify their use in poorer nations on the grounds that it alleviates poverty, famine and disease. A global perspective would recognize the loss to all nations through such a program and would advocate, instead, making non-polluting

materials and processes universally available even though it be costlier in the short run.

What these examples tell us is that local perspectives of affluent countries, which permit the continuance of unequal distribution of wealth and political power, are forcing the poorer countries to adopt a local perspective in order merely to survive. But the struggle for short term survival threatens long term, global survival; the local perspective cannot stand alone. Separated from the global perspective, localism fails even to save itself.

Opportunities and Hazards

Viewing local and global perspectives as existing in a state of complementarity within globalism offers a number of opportunities for growth in environmental awareness for students.

1. It provides a practical means of learning about general systems theory by becoming familiar with the global system, the concepts relating to interaction such as feedback, synergism, etc., and how the human and the non-human components interact.
2. The most realistic, though sometimes discomforting, view of the world can be considered in learning about localism and globalism as perspectives. The student

can see how the nation-state fits into the world system, thereby gaining a clearer perception of his own life within a global setting.

3. Anthropological concepts and insights can be explored from the standpoint of perceiving one's own society and culture within the matrix of the global system of cultures. A deeper basis for identity can be established along with a better understanding of patriotism and super-patriotism.
4. Students can see the Third World as a developing entity with a dynamic agenda and with both a past and a future entwined with other components in the global system.
5. Opportunity is provided for the study of values and value systems. Value issues such as paternalism, racism, classism, exploitation and imperialism can be better understood as they are related to the distribution of resources, the "exporting" of polluting industries by developed countries, local and global carrying capacities, and limits to growth.

The hazards presented by this issue are in the form of threats to the concept of globalism. They arise out of two areas of conflict; one is within the individual and the other is between the affluent nations which consume a disproportionate amount of resources and the sometimes markedly less affluent societies, either Less Developed Countries (LDCs) or sub-groups within developed nations.

Accepting globalism as a basis for functioning both cognitively and affectively, almost always involves the process of shifting from a local to a global perspective. Often it means rejecting a perspective which is seen to be no longer adequate, yet is deeply ingrained within one's cultural heritage. Nazli Choucri Fields⁴ reminds us:

"...we must be willing to reassess even the most hallowed political, social, and economic assumptions and value preferences. Beyond that the merits of alternative solutions or policies can be assessed only in the light of assumptions, data and modes of analysis upon which they rest."

This is a painful process to which education has not traditionally addressed itself, having been more concerned with transmitting tradition than probing the future.

"Wherever the curriculum of formal education impinges on images of the world which the local culture around it treasures, sensitive areas are set up which are avoided as far as possible. Religion, race, and nationalism...are among these areas, and the study of the international system inevitably impinges on all of them. It is not surprising therefore that international education tends to follow the innocuous patterns of interesting stories about strange children, and any attempt to teach the international system as a total system might easily run into very serious criticism from the defenders of the local culture."⁵

Rather than face inner conflict, the individual or even his teacher or school system may choose to reject globalism, by separating the local from the global perspective, accepting a local diagnosis of environmental problems, and treating the global as foreign to his concerns. This would weaken globalism by posing the local and global perspectives as bi-polar entities, "local versus global," rather than as existing in complementarity within globalism.

Globalism is also endangered by mere theoretical acceptance. It is only by learning to plan and implement a local agenda for social change, involving shifts in the control and use of power and resources, that the individual's encounter with the environment becomes complete.

However, the most common threat to globalism seems to be in the emphasis that is placed upon viewing problems in local communities other than one's own from a purely local perspective, thus avoiding inner conflict by avoiding involvement. This is the kind of innocuous approach to environmental education that is illustrated by programs in which rural students study urban air pollution problems while urban classes learn about pollution from agricultural pesticides and fertilizers. This may well be the most widespread hazard which the concept of globalism has to overcome.

The second area of conflict, that between nations, has become especially intense since it has been realized that the

solutions to environmental problems impinge not only on religion, race, class and nation, but also directly upon the issue of survival. The rise of the crisis in the environment on a world-wide basis has projected the age-old human problem of allocation of resources upon a global screen. Floundering in technological luxury, immersed in the myths of what we have assumed to be a superior civilization, we now find ourselves confronted by the dilemmas faced by our primitive ancestors as they jealously guarded their kill--without a less bloody way to resolve the conflict.

The problem of allocation of resources today takes the form of a conflict between the nations which have had the cultural foundation to produce what we know as industrial society and those which have remained, in varying degrees, non-industrialized. It has resulted, in Joao⁶ Augusta de Araujo Castro's terse phraseology, in the "pollution of affluence" and the "pollution of poverty".

The conflict has many expressions. First, it is expressed in attitudes toward environmental exploitation. Especially since Stockholm, there is a clear consensus among developing countries that they have not managed the resources of their countries to their best advantage. This contrasts with the point of view of the industrialized nations which generally wish to conserve resources, which, on a global

scale, means preserving the status quo. Having exploited many of their resources, or having developed technologies, unavailable to many LDCs, which conserve resources, industrialized nations now are in a more advantageous position to practice conservation; however, this local perspective, imposed world-wide, deprives LDCs of a viable source of income, and forces them to retain their disadvantageous position. Second, whereas technology is viewed as a source of pollution by the industrialized nations, it is more often seen as a way to a better environment, through the lessening of poverty, by the developing countries. Third, whereas population increase is seen as an environmental problem and as a threat to survival by developed countries, it is more apt to be viewed as a means of survival and of gaining political power in the struggle for equality with other nations by the LDCs. Fourth, survival is more likely to be defined in longer spans of time by industrialized nations (which is one part of the global perspective), which is in contrast to the short range, sometimes day-to-day terms, used to define survival by LDCs.

The following observations emerge in this conflict:

1. There are three vectors around which the conflict centers: population, technology and resources, ⁷ all of which are linked to survival, either short range (developing nations) or longer range (industrialized nations).

2. The LDCs, as one would expect, realize that their most pressing environmental problem is the pollution of poverty, and they see industrialization as the most promising means to⁸ alleviate it.
3. Unless the affluent nations devise a serious and effective means whereby the wealth of the earth can be more equitably distributed, they will also suffer the cost of the environmental deterioration resulting from proliferation of industries in the poorer nations. Due to their lack of technology and need to compete, pollution from LDC industry will probably be greater per unit produced than in a developed nation.
4. Furthermore, without industrial development, desperation may drive LDCs to even more drastic attempts to gain a semblance of equality; with the spread of nuclear weapons technology, nuclear⁹ blackmail will become increasingly a possibility.
5. Therefore, the abatement of the pollution of affluence cannot be achieved apart from the elimination of the pollution of poverty. From a global perspective, no humanly acceptable way appears to avoid the stress that befalls the environment

when people are left to rise to affluence out of poverty in the destructive wake of the industrialized nations.

Pedagogical Problems

10

David King cites some obstacles to international education from a study conducted for the U.S. Office of Education which also hold for teaching globalism. First, he notes a basic tendency for schools to be dominated by a philosophy of provincial localism which leads to the fear of critical examination of locally-held attitudes. Second, he mentions that there is a lack of curriculum materials creatively presenting the global point of view. Third, inability to think about the future, inherent in the educational system, makes the consideration of new, innovative models of human society on a global basis difficult to accommodate. Fourth, the size, power, and moral tone of U.S. government, particularly in regard to foreign policy, makes it difficult to form an accurate international perspective. Fifth, we lack a well developed method of inquiry with which to explore subjects about which very little is known such as the international system. Sixth, teacher training does little to prepare teachers to gain a new and more comprehensive view of the world. One study¹¹ found that:

"...not more than 3 to 5 percent of all teachers have had in the course of their preparation to become teachers in the social sciences or any other area of the curriculum any formal study of cultures other than in the West, or have studied in a field which could properly be described as world affairs."

These are important problems with which one must reckon when presenting the global perspective. The local perspective which dominates the typical American school is, perhaps, the most basic. This perspective bolsters the status quo regarding the existing distribution of economic and political power locally and globally. Globalism challenges this distribution and, therefore, the school.

The most difficult pedagogical problems confronting globalism in environmental education are not the practical, mechanical ones, like how to arrange field trips; rather the problems center in how to make the educational system aware that without a global perspective they may soon be charged with bringing "death at an early age" not just to ghetto children, but to massive segments of humanity, if not the whole human enterprise.

Key Questions

1. What are alternative conceptualizations by which the local-global dichotomy can be comprehended for the purposes of environmental education?
2. What recent developments have taken place in teacher education, curriculum development, etc., which show promise of improving effectiveness in dealing with the issues of local and global perspectives?

3. What developments, movements, organizations, etc., within affluent countries can be depended upon to offer support and assistance in introducing globalism as a perspective into their own educational systems?

Questions arising outside the scope of the paper:

1. Do the principles of ecology lend more support to preservation of individuals and species (or societies) through a model of cooperation (biocoenosis) or competition (optimality) and which is most applicable to globalism?
2. Can cultural identity and diversity be perserved, e.g., the "human" qualities of third world lifestyles, or does the equalization of economic, social, and political factors imply the spread of homogenization which so often accompanies affluence?
3. What are the alternative means for coping with the conflicts triggered by introducing a global perspective into local environmental education programs?
4. In introducing a global perspective, what demands are placed upon achieving new understandings of one's own social class, ethnic, and racial background?
5. What should be taught concerning alternative ideological positions in order to openly share the choices to be made in developing the individual's global perspective?
6. What is the theoretical and practical state of readiness with regard to moving from the national identity of the individual to a global identity?

Footnotes

1. David C. King, International Education for Spaceship Earth (Foreign Policy Assn., 1971), p. 6. This book is based on an extensive study conducted by the Foreign Policy Association for the U.S. Office of Education on needs and priorities in international education.
2. Donella H. Meadows/Dennis L. Meadows, Jorgen Randers/William W. Behrens III, The Limits to Growth (New York: The American Library, Inc., 1972) p. 25.

3. Barbara Ward and Rene Dubos, Only One Earth (New York: Ballantine, 1972), p. 219.
4. Nazli Choucri (now Fields), "Population, Resources, and Technology: Political Implications of the Environmental Crisis" in World Eco-Crisis, David A. Kay and Eugene B. Skolnikoff, Eds. (Madison, Wisconsin: Univ. of Wisconsin Press, 1972), p. 37.
5. Kenneth Boulding as quoted by David King, op. cit., p. 30.
6. Joao Augusto de Araujo Castro, "Environment and Development: The Case of the Developing Countries", in Kay and Skolnikoff, op. cit.
7. Cf. Choucri, op. cit.
8. For a concise, objective summary of the problems and issues involved in development and the environment see "Development and Environment", often referred to as the "Founex Report."
9. Robert L. Heilbroner, An Inquiry Into the Human Prospect (New York: W. W. Norton, 1974), ch. 4.
10. King, op. cit., pp. 29-37.
11. Cf. Harold Taylor, The World and the American Teacher (Washington, D.C.: American Association of Colleges for Teacher Education, 1967), p. 26 (as cited in King, op. cit.)

Annotated Bibliography

1. U-Thant (1972). "Reflections of A Mediator", World, Vol. 1, No. 1 (July 4), pp. 38-41.

In this article, Thant reflects on the need for and the obstacles to what he sees as a coming global civilization. He emphasizes the role of education in enhancing global awareness which would lead to a global ethic, world law and world institutions. The essence of Thant's message is expressed in the assertion, "To deal with the global environment in national terms is a contradiction in logic".

However, U-Thant does not mean that cultural pluralism should be suppressed. What he intends is that the peoples of the world would profess a "second allegiance" to the

world community, currently most adequately expressed in the United Nations. "In addition to the allegiance we have to our own countries, we can have an allegiance to the human community as a whole and to its wellbeing".

2. Clark, Jere W. (1972). "The General Ecology of Knowledge in Curriculums of the Future", in Erwin Laszlo (ed.), The Relevance of General Systems Theory. New York: Braziller, pp. 163-80.

Drawing upon the thinking of Ludwig Von Bertalanfy whom he calls the "father" of general systems theory, Clark defines "the central ecological problem of our time...as the tendency toward 'the breakdown of the symbolic universe' of values", which he believes to be the correct interpretation of Bertalanfy on this subject.

Clark therefore feels that "the solution to this gigantic problem requires that 'a new symbolic universe of values must be found or an old one reinstated if mankind is to be saved from the pit of meaninglessness, suicide, and atomic fire'". The quotation here is again from Bertalanfy.

Clark suggests that the challenge posed by the ecological problem and its solution can best be met by viewing general systems theory as the best conceptual vehicle available for finding the design for the world of tomorrow and general systems education as the best educational vehicle for delivering the "new societal and environmental values which are emerging".

Citing the "case history" of the Center for Interdisciplinary Creativity, he provides a well illustrated example of an educational program which could be built upon the concept of the "general ecology of knowledge" which would accommodate the "emerging general ecology of nature (which) tends to be dynamic, action-oriented, organismic, relative, non-linear, open-ended, value-conscious, holistic, and inter-dependent".

The conclusion which Clark draws is that this design would require a shift from the local to the global perspective which would result in global values for global survival.

3. Faramelli, N. J. (1971). "Perilous Links Between Economic Growth, Justice and Ecology: A Challenge for Economic Planners", Environmental Affairs, 1, 2, (June '71), pp. 218-227.

The economic effects of ecological solutions to environmental problems are discussed in terms of the constituencies of the poor, the laborer, and the third world, with the conclusion that hardships of the poor such as reduced employment which are likely to follow environmental measures such as pollution control or slowed or re-directed growth mean that "economic and distributive justice must be integral to all ecology debates". This becomes even more crucial on a long range, global scale.

Faramelli points out that the American program of assisting third world countries to duplicate our model of economic development is fraudulent, for, if our model were reproducible, "and all nations consumed and polluted at the current American levels...the life support system of the planet might be destroyed by contamination".

He provocatively suggests that, "Americans ought to be grateful that world-wide development has failed. Continued global poverty makes possible our over-consumption and over-pollution".

This article does an excellent job of presenting the un-avoidability of considering local or national programs from a global perspective.

4. King, David C. (1971). International Education for Space-ship Earth, Foreign Policy Association.

This book is published under the School Services program of FPA and is based on their extensive study conducted for the U.S. Office of Education entitled, "An Examination of Objectives, Needs and Priorities in International Education in U.S. Secondary and Elementary Schools". "Its purpose is to suggest ways by which social studies teachers can add 'new dimensions' to their teaching, especially about world affairs."

This report serves as the basic resource for the book, makes possible a document that provides a comprehensive summary of and commentary upon the events which necessitate a new approach to international education, the obstacles which impede new developments, some current attempts at change in method and curriculum, and some strategies for change. In addition, a series of outstanding readings comprised of articles by Kenneth Boulding, Chadwick Alger, Robert C. North and Robert A. Harper, are appended. These

articles were originally published in a special issue (Nov. '68) of Social Education. This book offers an excellent compendium of the concepts and problems involved with local and global perspectives.

5. Kay, David A. and Eugene B. Skolnikoff, (eds.) (1972). World Eco-Crisis, University of Wisconsin Press, Madison, Wisconsin.

This book offers differing insights into various aspects of the environmental crisis to be considered in the development of international organizations and agencies. Many of the articles deal with issues arising from economics and development. Although the perspective of the industrialized nations is more heavily represented, reference to the third world perspective is frequent and the article by J. A. A. Castro is devoted entirely to the presentation of third world concerns, highlighting the points of conflict with the industrialized point of view. Documentation is mainly from United Nations studies and national government reports, however some of the articles are based on original research.

The chief value of the book is that it provides insight into the theoretical and empirical evidence which forms the background of the industrial and third world perspectives.

6. McHale, John (1968). "Global Ecology: Toward the Planetary Society", The American Behavioral Scientist (July-August), pp. 29-33.

The argument presented in this article is for revising human values around ecological principles, the emerging sense of global community and the need for preserving the integrity of the biosystem. The author summarizes the intent of the article in the statement, "We have now reached the point in human affairs at which the ecological requirements for sustaining the world community take precedence over, and are supererogative to, the more transient value systems and vested interests of any local society".

McHale offers a very excellent introduction to the local-global issue; he bases his argument on evidence of global biophysical perturbation, but directs it toward the "socio-cultural" factors of local societies.

7. Aaronson, Terri (1972). "World Priorities", Environment, Vol. 14, No. 6, (July-August), pp. 4-13.

The purpose of this article is to interpret some of the events which took place at the United Nations Conference on The Human Environment in terms of their significance to the agenda of the third world countries. It offers a review of the Conference proceedings and documents the political nature of global environmental issues.

8. "Development and Environment", A Report submitted by a panel of experts convened by the Secretary-General of the United Nations Conference on the Human Environment, Founex, Switzerland, 4-12, June 1971.

The Report organizes the environmental problems of developing countries into two categories: those arising out of poverty, equated in the Report with lack of development, and those that arise out of the very process of development itself. The concentration, however, is on the former category. It offers a very excellent introduction to the issues confronting global society in the shift from the local to the global perspective.

9. Heilbrunner, Robert L. (1974). An Inquiry Into the Human Prospect, W. W. Norton and Co., Inc., New York.

This book offers a penetrating summary statement of the political, economic, and moral dimensions of global survival. Although the information presented is not new, the conclusions extrapolated from current data are worthy of careful consideration. Heilbroner believes that humanity's present incapacity to deal with three "external" challenges, the population explosion, the threat of nuclear war, and environmental collapse has created a mood of pessimism mixed with resentment and anger. He calls for a dismantling of the growth-oriented capitalist and socialist industrial state, implementation of programs of social justice and equalization of wealth on a global scale, and political identity with future generations. The figure of Atlas from Greek mythology who bears with "endless perseverance the weight of the heavens in his hands" is suggested as a substitute for Prometheus, who has inspired us into our present condition. "If mankind is to rescue life, it must first preserve the very will to life, and thereby rescue the future from the angry condemnation of the present."

Interview Questions:

1. Overall, what reactions do you have to the working paper on local vs. global perspectives?
2. What is (are) the best conceptual Model(s) of the local-global dichotomy for the purposes of environmental education?
 - a. Is this model drawn from and supported by an ecological-biological perspective, a societal perspective, or both?
 - b. What influence do you see this model having on policy and programs of environmentalism and goals and means of environmental education?
 - c. Is it feasible and sound pedagogically?
3. Can the equalization of access to resources, social amenities and economic and political power be accomplished without supplanting traditional cultural values with the cultural homogenization which so often accompanies affluence?
 - a. If so, is it the responsibility of environmental education to develop a formula by which this can be achieved?
 - b. Where does this task rank among the priorities of environmental education?
4. What do you find to be the theoretical and practical state of readiness with regard to moving from a national to a global identity in our society?
 - a. What should be taught concerning alternative ideological positions in order to present openly the choices to be made by the individual in developing the global perspective?
 - b. Do you feel these positions should be introduced into the educational curriculum by environmental education?
 - c. In introducing a global perspective, what demands are placed upon the individual to achieve new understandings of one's own social class, ethnic, and racial background?

- d. What are the alternative means for coping with the conflicts triggered by introducing a global perspective into local environmental education programs?
- 5. What recent developments have taken place in teacher education, curriculum development, etc., which show promise of improving effectiveness in dealing with the issues of local and global perspectives?
 - a. How can environmental educators avoid the temptation of concentrating on distant problems from a local perspective rather than attacking local problems from a global perspective?
 - b. What do you believe is the most effective way to link the exploration of the global perspective with the development of the support system for environmental education?

Interview participants:

Anne Adamcewicz
Ethel Hackney
Bill Hansen
David Sutton

B. Hansen:

The first thing that I would like to do is to ask for your reactions to this issue, to the phrasing of the topic and most importantly to the working paper.

A. Adamcewicz:

As I understand it, localism is a perspective limited by time and space, whereas globalism refers to a system which is not limited to time and space, unless there is a new definition that we can come up with.

D. Sutton:

In the book, Limits to Growth, by Meadows et al., there was a time-space diagram, which showed how under a local perspective the immediate in both time and space is of greatest concern while under a global perspective the future becomes further removed from the present and geographic space is extended to the outer limits. This is true for both physical and social concerns; globalism extends the concern for the local community to the state and nation and beyond. I also think that both localism and globalism are local issues; local communities are inputs to the global system and vice-versa.

A. Adamcewicz:

My contention is that local refers to a system at a local level, differing from global only in that it is quantitatively limited.

D. Sutton:

This applies to ideas as well; it is basically philosophical. Every particle is essential to the universe. Local problems reflect global problems. We should realize that we are not isolated from the whole system. Eastern philosophy

accepts this; Western philosophy, with the influence of the Judeo-Christian tradition, has a more polarized understanding of the macro and micro.

E. Hackney:

Your own situation may make it difficult for you to accept a global perspective. You will find it difficult in terms of a global perspective when a local, immediate situation demands a local perspective. But I agree with him; the local assumes the global.

D. Sutton:

In that situation globalism may be a luxury, a by-product of affluence. However, according to some Eastern traditions, such as Taoism and Hinduism, men can experience global reality through contemplation or mediation and still be completely immersed in the immediate situation, the "here and now."

B. Hansen:

Is it a luxury to think globally, really? Meadows points out that many people today are working from dawn to dusk with a local perspective only to have their plans shattered by a global development--it is not a luxury any more. Perhaps Eastern philosophy is not a luxury, but a necessity if we are going to survive....

D. Sutton:

What does it mean to be global in our thinking? Does it mean taking responsibility for our actions? That what we do in the local context may have consequences in the global context and that we should assume responsibility for them?

B. Hansen:

Is David suggesting that a global perspective means ultimate accountability?

E. Hackney:

It brings up a lot of decisions that you are not able to make, such as the global effects of your actions. It might sound good, but logistically it is hard to really know what course of action to take.

B. Hansen:

I would answer that the question of how to be globalistic is an important one but prior to it is the question of whether we even want to adopt a global perspective.

- E. Hackney: This is what I am questioning. To be globalistic assumes a set of values. Who shall determine these values and whether they should be imposed upon others?
- D. Sutton: Maybe the ultimate value should be to preserve diversity. Cultures should be maintained and fostered providing that they do not infringe on others.
- A. Adamcewicz: Don't force the transistors on them.
- B. Hansen: To analyze our actions in terms of their effect on other people is a part of the global perspective. As I see it, localism assumes that your way is best for everyone; when you start asking should I influence others, you are operating from a global perspective.
- D. Sutton: Right. Globalism and localism are problems only in part concerned with geographic definition. You see, localism doesn't necessarily have to mean the town of Ann Arbor; it could be the church, the home, the business corporation, state or nation. . . .
- B. Hansen: Basically, does globalism pose different values than localism? A secondary question of how we get them imparted really belongs to pedagogical theory. Certainly we have to deal with that eventually, but the prior question is, are there values? If so, what are they? It seems that we are saying, yes there are. And they mean generally an inversion of the values commonly held by American people.
- D. Sutton: There are connections between us and peoples of other countries. I think being responsible for the impact we have on them is an implicit value of globalism, and that is a new perspective for Americans. We should be responsible to the Peruvians

for the sardines we take and give to our cats, and we should be responsible to the Africans for using their peanuts. There are something like 18 absolutely essential minerals needed for industrial civilization and our country has a sufficient supply of only a few. The others have to come from some other country. That other country might get to the point one of these days of needing them for themselves. We should be responsible for robbing them of their birth-right for the same development we are incurring right now.

B. Hansen:

How do you feel about that?

E. Hackney:

Well, my feeling is that the other nations might decide to want more for themselves at the same time. They are probably in the same predicament that we are in. They will need 18 too and they won't have all 18; nations will just have to share around. The other nations will have to stand up and demand their share.

A. Adamcewicz:

I think, too, that I agree that you have to assume responsibility, but I was thinking of the old phrase, "you've got the world on your shoulders." That can go just a bit too far as well, and in accepting responsibility, you feel a kind of self-righteousness coming on.

D. Sutton:

It should be a humble responsibility. We are the culprits. It's not that we are bringing solutions to the rest of the world, but a stance of being responsible for most of the problems, a humbling perspective.

B. Hansen:

In other words we have to be careful that we don't get into the old stance of perpetuating what has been America's position in the world. The world up to now has been seen as our responsibility and we have taken the approach that we must show those poor devils how to live. This is the world viewed from the perspective of localism. Therefore, I would contend here again that it is important how we conceptualize this issue.

E. Hackney:

The other country really wants to be in the position we are in. I don't think we ever are going to reach any situation where the whole world is going to live in harmony because human beings are just not made that way. I don't believe. Basically, deep down, each and every one of us, to a more or lesser degree, wants to be on the top of the heap, and you want to be a part of a city or country that is on top. I don't think there is any country over there that just wants to be equal with us, they want to be superior.

D. Sutton:

How feasible is it to adopt a global perspective when the world's resources have finite limits? What's the feasibility of the rest of the world's being developed to our level, to be honest? Either there will always be an elite in the world that will use the majority of those resources, or we will adopt the egalitarian stance and we will try to evenly disperse all the resources and all the industry around the rest of the world.

E. Hackney:

I don't think that we are all ever going to be fair citizens, because I think if you took a group of three-year-olds and put them in a room and put some blocks and whatever you might have in there and you watched them through a two-way glass, things aren't going to be divided equally in that room. Some of them are going to be more brave than others and some are going to be leaders and bosses and parcel things out.

A. Adamcewicz:

That's part of the educational process though. The idea of socialization is necessary to enable the person to say that though one is stronger, you need to respect the smaller one and give him enough integrity that he feels that he is a whole person too.

- E. Hackney: In real life it's never going to happen-- if I'm stronger, I'm going to share equally with you? I don't believe it!
- D. Sutton: This is really an interesting point because it's the idea of whether competition in one form or another is inevitable. It's a continual debate between biologists and sociologists. I believe that, as a biologist, competition is inevitable and I think that what you were saying is true.
- E. Hackney: That's why I question the "do-gooders" in the community. Now, I don't say that they don't do good, but I question how many of them are really doing whatever it is they do for the good of society-- I think they're doing it for the fulfillment that comes from it.
- D. Sutton: Well, if it serves both functions, that's great.
- A. Adamcewicz: That's when we stress the restructuring of society again and I'd like to think yes, it's possible. Sometimes I can become a perennial cynic because I'll never get there, but I always have to look there to say yes, we can have a humanistic society. In a humanistic world I can be a real person, we can be a real group, and just build on that. I would like to use that as a goal rather than the competition model, and that's a personal view on this, but also as a view in globalism too.
- B. Hansen: The question that I would like to throw out here concerns the global conceptual model employed when we talk about competition versus sharing. The fact that we look through a two-way mirror and see these three-year-olds getting the upper hand over each other does not mean that we have to take the three-year-old's model of reality as the best possible model we can use. We may have a better model.

A. Adancewicz:

I'm glad you made the point--we do have a choice.

D. Suttor:

I don't believe that we do have the choice! We have the choice to temper it and to go to a certain limit; but we don't have the choice to deny competition any more than the law of gravity. I think we are going to have to 'fess up to it even if it hurts. We have to admit we are biological organisms, and in a biological world, competition exists. Flying, going to the moon, doesn't deny the existence of gravity. We accept it and from there we go and say okay this is what we're going to have to live with, now how do we use it? How do we alleviate the impact competition has on the competing individuals? A good arrangement would have what benefits the individual benefit the group if that can be done. It's a nice thought that there can be universal love present with everybody completely getting outside himself, losing his ego and each one being for all. But I don't think that's biology.

B. Hansen:

Well taken, David. The point I'm trying to make in this paper is that as a part of our competitive desire to survive today, we are up against the wall and the only option open to us is to share. I see this as something where we cannot divide the ideological from the basic biological, psychological nature of man who is an aggressive, competitive beast. It's a matter of how we are going to survive in this world together--we are at this point in environmental education. Ideology is a part of a realistic approach. I'm saying that the most realistic approach is to share the resources of the earth and to propagate a truly humanistic model for mankind.

E. Hackney:

I agree with you, but unless you change basic human nature, this desire to compete in order to make sure that I do a little better than you is going to make that real

sharing difficult if not impossible. I just don't see how it is actually going to work in practice. I had an experience last week which was interesting to me. A friend of mine who was a former clergyman had a little party and quite a selection of people were there. The most interesting person there to me was a bishop from South Africa, who is colored, and who happened to be in this country to study on a trip sponsored by the State Department. Listening to that man talk kind of bothered me, but then, I have to look at it from his viewpoint; you have the whites, the coloreds, and the blacks, and the whites have the very best of everything although they are a very minute percentage of the total population. In between is the colored, and at the bottom is the black who is by far the most numerous. And this man who is colored, is very much in favor of the whole system of apartheid, because he's got it made--he's got a pretty good position and he's really fearful that if this system ever should break down he would stand to lose, because he realizes that the whites don't like the blacks and the blacks don't like him and he's right in the middle of it all. Another friend basically said the same thing. He is very much in favor of apartheid because he realizes that he is really in a pretty good position as a result of this system. Now what I'm basically saying is that human nature says look out for number one. How are we ever going to reach this goal of universal sharing? I mean I realize it's a worthy goal, but are you basically concerned as much whether my stomach is full as you are whether yours is as full? I guess this is what I'm asking. While on paper it looks good, can you ever reach that state where you cramp just as badly when I'm hungry as you do when you are hungry?

B. Hansen:

What I'm saying is that if I'm going to be satisfied and stay satisfied, I've got to make sure you are not hungry; otherwise we will all collapse together.

E. Hackney:

There was an interesting experiment in Washington at one of the churches. Teenagers went to this church on Friday night and there was no food for them to eat. They went in Friday after school and they stayed there 24 hours with absolutely no food. Well, when mealtime came, some had a plate with a little bit of rice and some had a plate heaped up with fried chicken, hot rolls and so on, and then they stood back and watched to see how they behaved. Now these were all friends and members of the church group, and in a few instances some of these kids who got the fried chicken wolfed all of it down without sharing any of it with some of their friends who weren't given anything. However, there were others who shared their food.

B. Hansen:

Would you say this was a lesson in environmental education?

D. Sutton:

Maybe a lesson in human nature, that humans are at one and the same time social animals and individualistic, self-seeking animals. They have both of these basic behavioral tendencies deeply rooted in a common biological heritage. Many environmental problems can be viewed in a different light when these elements of human nature are revealed. There is an analysis that I like that treats individual actions in an environmental context and indicates the need for social intervention. It is the "tragedy of the commons." It's basically the idea that in a situation where there is a commons, everybody involved is free to pull, to extract, and take from it. The classic example is that of the pasture where there are a number of herdsman and each has his own herd but they all use the common pasture. Each man has the incentive to add to his herd because he accrues the benefit of an extra cow which he in turn will sell. Up to a certain point this continues to work; then, however, they reach what the biologists call the carrying capacity of the pasture. They reach a certain point--let's say 100 cattle--beyond which they begin to destroy the soil, thereby decreasing the total carrying capacity. Each

individual maximizes his gain by adding cattle, but the cost of his gain is dispersed among all the users, so that he's locked into that logic that says, I can continually increase my benefit whereas the cost of my actions is shared by everybody. The power to commit an act is effectively separated from the responsibility of committing it. I think that this is an untenable situation because everybody is driven by the same rationale to the exploitation of the commons. He is driven to increase his gain which ultimately results in the ruin of the system. Garrett Hardin proposes two ways out of this situation. One is to break this pasture down, which was done through the enclosure system. What this really did was to give certain people parts of the pasture and make them totally responsible for it. It wasn't a totally just solution because some of the herdsmen were excluded. But it did make each person directly responsible for the impact his cattle had on his land. Now he's more concerned about the land, because he not only gets all the gain, but he also suffers all the loss. Another way to avert the tragedy of the commons is for all the herdsmen to collectively decide what the limit is, regulate the use of the commons, and then divide up the benefits and the costs. You could consider one solution as that of private enterprise and the other as a socialistic solution. In either case, the destruction of the system is averted. Rational men utilizing a commons of air or water come to the same conclusion and produce the same results. They derive benefit from using the atmosphere or body of water as a sink to dispose of their wastes; the cost of their act is borne by all those contacting the air or water. Each individual utilizes the commons for his own gain without accepting the total cost for its use. The tragedy of the commons operates at the global level as well. Take the world's fisheries where several species of whales and fish are fished to exhaustion by being treated as denizens of an ocean commons. Any resource, where the power

to use it is separated from the responsibility of its wise use, is subject to overexploitation as a result of this logic of the commons.

E. Hackney:

Going back to the matter of people living in the here and now, we find once more that human nature is the salient factor. And I simply don't know how fast it's going to change. Take this past winter when we felt the effects of the energy crisis, for example; people who had oil heat who received their fuel delivered by the tankful and weren't able to control how much they got, tended to turn their thermostats down. On the other hand, people who had gas heat, where it all comes out of one common system so that the amount supplied to individual homes cannot be controlled, did not think as a common body in turning their thermostats down. Instead, they thought, I'm getting my house warm as long as there is some gas left in the pipe because we're all connected to the same supply.

D. Sutton:

In fact, you're pressured into not turning your thermostat down because if you do, you're thinking to yourself, I'm drawing from the gas like everybody else, and if I take less, somebody else will simply take what I could have had.

E. Hackney:

That's right, that's human nature

B. Hansen:

But here again we're operating under a local perspective, and we are really trying to consider in this discussion both the local and the global perspectives and which can be supported by environmental educators as more environmentally sound.

D. Sutton:

This type of analysis applies equally as well at the global level, and either way of getting out of the commons will preserve the environment. One may be more unjust than the other, I think, and that's where things get sticky. The one way allows us as developed nations to enclose the world's resources,

allowing specific nations and "civilized" societies to be in control, and letting the rest of the world go by the wayside. The other way would involve some sort of world government which would regulate the use of all the resources.

E. Hackney:

And the ruling class would make all the decisions.

D. Sutton:

Not necessarily! I don't know if it is possible, but a world government could be based on world consent.

E. Hackney:

What I'm saying is that in any government, as is mentioned several times in the various working papers of this conference, there are certain ruling classes who make decisions, and many times the people who are the most affected have the least voice

B. Hansen:

Does environmentalism actually foster and support humanitarianism?

D. Sutton:

That's a good question. There's a big dichotomy between the analyst and the humanitarian. The analyst can build up an argument that giving food to underdeveloped countries increases the population which in turn increases malnutrition and in the long run increases the amount of human misery. It is, therefore, an "inhumane" thing to do. Now on the long-term perspective, you can't challenge that rationale, if your ultimate goal and the ultimate good is the number of lives you save.

A. Adamcewicz:

It's the quality of lives you save and the quality of life maintained by small numbers that counts.

D. Sutton:

Let me add a quick little note to that idea. George Borgstrum, the nutritionist, contends that if you took all the world's agricultural potential and you produced food and distributed it equally to the 3.8 billion people on earth, everybody in the world would be both malnourished and undernourished. Today the prospects

for population increase are very definite; the prospects for increase in agricultural output are much more indefinite. How do you put that in perspective?

B. Hansen:

Your pointing to all these things doesn't alleviate the necessity for coming down on the side of either a local or a global perspective. Isn't a global perspective more congruous with ecological survival than a local perspective?

D. Sutton:

Sure. . . .

B. Hansen:

Do you want to consider question number three which asks about guaranteeing equal access to resources in order to insure equality, yet, in the process, destroys cultures through homogenization? If the goal of the global perspective is to see our influence on other countries critically, as to whether or not it ought to be their decision what they do with their culture, then you would not want to force industrialization on them in order to bring their standards up to ours as we are doing now through various aid programs.

D. Sutton:

Economic determinism.

B. Hansen:

This question really asks: What position should environmental educators have as they teach the global perspective, regarding the equalization of access to resources and the smothering of cultures that takes place--the destruction of cultural values? In other words, should we support current economic development programs that homogenize cultures or a policy such as "Africa for the Africans."

D. Sutton:

You know, as a biologist I opt for preserving diversity, but I wouldn't want to force diversity.

B. Hansen:

The points that David is bringing up really affect our global perspective because, if you're a globalist, then you have to reckon with these problems--what to do about

different cultural lifestyles, different cultural values. I think that you have to deal with them on the basis of whether or not they do fit a global model, and if a culture, regardless of how traditional it is, is a purely localist thing that is seeking to arrogate the whole world to itself, which is the local perspective, then I would say this doesn't fit and we have to confront this.

A. Adamcewicz: Then again, if I'm hearing you properly, the goal of survival becomes paramount, and, comparing that to China, which has state goals which are good, there is a trade-off of homogeneity and the loss of individualism. Is that what you're saying?

B. Hansen: No, I think that the model we are talking about allows for a lot of individuality; in fact, it fosters it and encourages it, but at the same time, when the individuality begins to upset the balance within the whole system, then it has to be confronted and stopped.

D. Sutton: How can we have a stable macro system allowing diversity to play out, exercising individual freedom and everything else within a local perspective, and still maintain a global perspective?

A. Adamcewicz: What if one is a wasteful consumer? Who defines the morals; who defines the goals of globalism--environmentalists?

B. Hansen: For the sake of this discussion, I will say that I believe environmentalists have to be willing to set environmentalism up as a kind of new principle to live by, a new "theology" of life.

E. Hackney: What actually is equal access--I know what it is in theory but in terms of practice, what is equal access? Here's an example that I gave this morning. If you put a large pile of goods in the middle of the floor and tell everybody to run and get as much as they can, yet one guy is on

crutches and somebody else has short legs, do they all have equal opportunity? How do you assure equal access in practice? I don't see how it is ever going to work in the real world.

A. Adamcewicz:

I can say that you can probably define it in theory, but I don't have a working model either. I can only make an application on a small scale.

B. Hansen:

Let's not be swayed too much by Ethel's pragmatism, or maybe I should say pessimism [laughter], because look at societies in the world today. There are some where a few elites have all the power and wealth and the masses border on starvation; yet in others there's a lot more balance. In the nations of Western Europe, for example, poverty is practically unknown. The choice is not between an unworkable utopia and a functioning though clearly unjust system. What we're trying to do is to build a better world, not necessarily a perfect world; but we have to have some models to go by and they must be idealistic if they are to guide us to something other than what we have now.

D. Sutton:

Does this model we are talking about require world government? Regulation of the world system seems necessary, and how do you regulate the use of the oceans, for example? When you do you're infringing on the water rights of nations, right?

B. Hansen:

I would say, yes, it requires world government.

D. Sutton:

What is the feasibility or the possibility of that?

B. Hansen:

My first step would be to gain consensus on the validity of the global perspective for the schools and for society in general. Then I would determine who is to implement globalism. Should it be left to environmental educators, or is there some other group who could promote it?

- D. Sutton: Economists probably think that they have a pretty nice global perspective. They see economies as interdependent.
- A. Adamcewicz: So do musicians, historians, sociologists. I'm sure other groups can build it.
- B. Hansen: As I read economists, they usually have a local perspective.
- D. Sutton: Even regarding international corporations?
- B. Hansen: Multi-national corporations are extremely localistic with narrow viewpoints, essentially interested only in how to develop their markets.
- D. Sutton: They say they are providing money for the countries in which they have their operations.
- B. Hansen: What multi-nationals are, I think, is simply what has been going on in America and other capitalistic countries all along, which has now spread to a world-wide basis; and I certainly wouldn't say that was the spread of globalism. It is simply the spread of localism on a global basis.
- D. Sutton: I'm still worrying about after we accept the global perspective, how we implement that perspective into practice. How do we control the global commons?
- B. Hansen: I would think, first, the idea of accepting the model of globalism is necessary; then one can work out how it is to be implemented and controlled, whether through world government or some kind of an international cooperative alliance, etc. But that is the next step. Right now, we still have the idea being promoted that we are going to have energy independence by 1980. This kind of thinking is prevalent in the schools. Now the question facing us first is this, is it the task of environmental educators to supplant these localistic ideas, this perception of localism as a conception of

reality, or should environmentalism be in favor of globalism, but not deal with it because it should be handled by sociologists or economists or, in other words, somebody else?

D. Sutton:

I think we should. Interdisciplinary environmentalism has to

Comment by Bill Hansen:

The discussion followed the prepared interview questions, since the group made no objection and offered no alternative.

The discussion began with efforts to clarify the concepts of "localism," "globalism," and "complementarity." The appropriateness and usefulness of the model was widely questioned. An alternative model was sought from the group, but none was suggested.

The concept of globalism was challenged on the grounds that (a) biology teaches that all organisms must operate from a local perspective to survive, and (b) people are incurably competitive and competition precludes globalism. Efforts by the interviewer to suggest that survival in local terms was dependent on a global perspective were received with little enthusiasm. Overall, the group saw globalism as a worthy but impractical concept.

The discussion seemed slow-moving and uninterested. To the interviewer, the group seemed unwilling or unable to deal with the problems involved in conceptualizing the issue, preferring instead to discuss the objective conditions that confront modern society and keep us local in our thinking. As a result, the interviewer was unable to refrain from interjecting his own views, even though they were not aiding the group interaction. Rather than forcing the abstractions from the paper on the group, perhaps it would have been better to work through the group's more pragmatic approaches in order to arrive at the conceptual level.

The Autonomy and Integrity of the
Learner In Environmental Education

By Judy Gingert in consultation with project staff

An environmental educator is self-defined. Whether a scientist, student, teacher, or worker, those people concerned with developing a more ecological and humanistic outlook on the world could properly be called environmental educators. An egalitarian perspective seems necessary to the field, a belief in the capability of people to make reasonable environmental decisions.

And yet, environmentally disastrous decisions are being tacitly supported daily. Clearly there is a need for environmental learning to go on. Environmental educators are searching to find teaching techniques that are effective in developing people that do make reasonable environmental decisions and are also compatible with a commitment to egalitarianism. It is the very process of changing behavior that the dilemma of the autonomy and integrity of the learner focuses on.

Many models of human behavior change are available. No consensus exists as to which view of the person (the learner) contains more validity. But the adoption of one or the combination of several determines the style of behavior change used by environmental educators.

The outcomes of the understanding of differences in perspective can affect the direction of the environmental

movement and who will be involved. The determination of a perspective will also result in the type of skills environmental educators need and the type of organizational structures they need to be effective. What training should learners and educators alike experience? A comprehensive understanding of information? Skill in having a viewpoint accepted? Value-sensitivity? The relative importance of each of these skills is set by the perspective an environmental educator assumes. The various perspectives on individual autonomy must therefore be explored.

Environmental education shares the goals of all forms of instruction. Regardless of the words and rationalizations used, no teaching goal can be reached unless the student is influenced to become different in some way than he or she was before. A teacher is admittedly working to influence the capabilities and understanding of the student, whether trying to help the student develop a skill, to feel differently about a subject, to feel an appreciation for something, or to feel self-esteem through mastery of subject matter (Mager). The interplay of the teacher's commitment to the influence attempt and the commitment to furthering student autonomy often creates conflicts difficult to resolve. Part of the resolution depends on the perception of what the student is, what autonomy and integrity mean, and how they are achieved.

Dictionary definitions of the words are deficient. Autonomous has words such as independent and self-governing coupled with it. Integrity is accompanied by a trio of words: whole,

entire, undiminished. Its second definition talked of soundness of moral principle and character. But the words mean more than the definitions allow. Autonomy and integrity build powerful images of the right of a person to be self-defined, to choose those beliefs and behaviors to be incorporated into his or her life. Student behavior that reflects these concepts is often labeled as delinquent, emotionally disturbed, or politically radical.

Most interpretations of the words, however, are not made from the student point of view. Most interpretations involve supposed ethical value judgments on the means of influence to be used by the educator. The connotations of the words denounce attempts at manipulation of individuals and of persuasive means that are not explicitly stated. The individual should somehow not be tampered with, but left alone to evaluate the world. These overtones of autonomy imply that this sort of unaffected behavior is both possible and desirable. The agreement or disagreement an environmental educator holds with the connotations of the words is of utmost importance.

If this type of unaffected behavior is possible and desirable, then all attempts at influence, including teaching, could be considered unethical unless they could be done in a completely objective manner. The idea that human behavior can be controlled or influenced is in seeming contradiction to the belief of humans as free and autonomous agents.

Psychologists are identifying conditions and variables that can be used to predict human behavior. People living together control and socialize each other's behavior by praise, criticism, and physical acts. Whether a student is encouraged to accept one interpretation or is encouraged to seek more information, the process of influence and behavior change is the same. These acts, Skinner states, are premised on the belief that human behavior is subject to identifiable variables and controls. He calls into question the validity of linking the concept of autonomy with unaffected behavior and begins to develop an alternate view of what autonomy might mean.

Carl Rogers, often posed as a counter to Skinner, is in agreement with many of his basic points. He states:

I believe we agree that the behavioral sciences are making and will continue to make increasingly rapid progress in the understanding of behavior, and that as a consequence the capacity to predict and to control behavior is developing with equal rapidity. I believe we agree that to deny these advances is unrealistic. (Rogers-Skinner)

Thus, Rogers and Skinner dismiss the issue of whether human behavior control is possible. As the different manifestations of this control become apparent, people will need to deal with not if they will be used, but how they will be used.

Rogers states:

I believe we are in agreement that the tremendous potential power of a science which permits the prediction and control of behavior may be misused, and that the possibility of such misuse constitutes a serious threat. (Rogers-Skinner)

Rogers frames the issue of autonomy and integrity in a series of four questions: What type of control will be exercised? Toward what end or what purpose, or in the pursuit of what values will control be exercised? Who will be controlled? Who will exercise control? The resolution of these questions for environmental education determines the direction of the field.

What type of control?

Environmental educators strive to be effective in bringing about behavior in people that is consistent with an ecological and humanistic perspective of the world, whether in the classroom or the community. The skills needed to do that involve acquaintance with different theories of behavioral change and practice in their utilization. What are different models of changing behavior?

One view of the way individual behavioral change occurs holds that a person's behavior is a function of the values he or she has formed. The formation of ecological values, then, is necessary for sound environmental behavior. Value formation begins with certain beliefs the individual professes. The interaction of a set of beliefs around one particular subject leads to attitudes on that subject. An attitude has both cognitive and affective elements and promotes a tendency to act. As these attitudes become subject to questioning, they may begin to come clear and become values that person adopts. The process

of value clarification, therefore, is essential to any significant behavioral change, for it is values that guide what actions an individual will take.

For example, a person might be concerned about nuclear energy. Beliefs about centralization of power, about possible misuse of technology, and about wise use of natural resources might interact as the person begins to form an attitude about the subject. This attitude might question what governmental control of energy sources might mean, the safety of nuclear energy as an alternative, and the depletion of uranium and plutonium reserves for excessive energy production. Value clarification techniques would help clarify these attitudes and suggest how to implement these attitudes into the person's style of life. Some techniques of clarification that could be used in this situation would be forming a continuum polarizing all-out development of nuclear power against a complete stoppage for all time; rank ordering coal, solar, and nuclear power as energy sources; making contracts with individuals about one small public action they might take to support their values on nuclear energy. These activities would all channel and direct behavior, and serve to solidify the values a person has on a topic. The method works best for the goals of environmental education when the attitudes individuals hold are already defined as sound environmental attitudes. Clarifying those values might result in action very beneficial to ecological

goals. The conflict for the person committed to clarifying values occurs when he or she is confronted with values that seem destructive to environmental quality. Should these values be clarified if they will result in behavior that directly works against environmental goals?

Closely linked to the values clarification model of behavior change is the information strategy of change. Once enough information about a subject has been distributed, individuals will change their behavior to reflect the conclusions the information presents. It is important in this strategy to have all sides of an issue presented, especially if the issue is a controversial one. If the information about the detrimental effects of non-returnable cans as well as their convenience was presented, people might begin to boycott or recycle them. This strategy works effectively when people are already seeking information (Sandman). Intensive educational campaigns alone, however, do not noticeably change habits or beliefs. They must be correlated with an environment that encourages the new behavior sought (Etzioni).

Another change model currently being utilized in the field of environmental education seeks to create an environment that encourages new behavior. It is based on the premise that behavior usually precedes any firm values on that subject. The consequences of behavior will determine whether it will continue or not, and will determine what beliefs, attitudes, and values

become associated with the subject. This is basically operant conditioning. Human control should therefore be associated with the reinforcements selected for specific actions people take in relation to environmental conditions (Grear).

Skinnerian behavior modification has been shown to be enormously effective as a means to influence human behavior. If an individual is reinforced by food, money, or praise when he or she turns the lights off when leaving a room, that behavior will soon become a habit difficult to change. By using different reinforcement schedules and by generalizing reinforcement, that habit can be maintained with a minimum of effort. Operant conditioning, however, is subject to severe limitations. The behavior change wanted must be specific, identifiable, and quantifiable. The person giving reinforcement should have maximum control of the reinforcer, be it free time or social praise. These two conditions are hardly ever available. When they are, the dilemma is raised whether any one person or group should have maximum control of a reinforcer, be that person a teacher or businessman or politician. The question of autonomy and integrity of an individual again becomes apparent.

People involved in advertising and persuasion widely believe and operate under still another change model. Here behavior is changed not by tangible rewards or disadvantages being provided but by attempting to couple the behavior with

an emotional need. The behavior assuages some need and becomes a positive reinforcer. The need may not be a rational, relevant one; whatever serves to stimulate a desired response will do. After the response is occurring, information to justify it may be introduced to maintain it (Sandman). If the impression that organic food makes people beautiful can be created, more people might buy organic food. Further rational information could then be offered to strengthen that behavior.

An example shows how these different approaches might work out. A major metropolitan area suffers massive traffic jams during rush hours, especially across one bridge. Parking spaces are at a premium, and roads are jammed for several hours. Faced with this problem, it is decided that both highway expansion and mass transit are unattainable at present. Attention is focused on individual behavior, and carpooling is decided to be the most reasonable short-term solution. (The correctness of the analysis is not the question here, but merely the situation.)

The person operating from the information perspective might begin a massive information campaign to acquaint the commuter with the advantages and sensibility of carpooling. The campaign might highlight the environmental advantages of fewer cars and the personal economic gains. A person would modify his or her behavior accordingly.

A value clarification technique might be to develop a questionnaire to ascertain how the commuters felt about the situation and how they ranked personal independence against the inconvenience and expense of traffic jams. The choice would be directly offered to the individual. Hopefully the individuals would clarify how they felt about the issue and a majority would voluntarily agree to carpool.

Operant conditioning would try to alter the situation to provide positive reinforcement for carpooling. Perhaps the car toll for the bridge would decrease as the number of passengers increased. Or a law might make it illegal to drive alone in rush hours on certain streets. The environment would be structured to provide economic rewards for carpooling. The individual, in this case, is not consulted about his or her feelings about the idea of carpooling, but encounters a changed environment. Behavior change comes about from the response of the individual to this new environment (Grear).

A media campaign managed by a persuasion individual might have an actor endorse carpooling with a beautiful actress at his side. Or perhaps a folksy couple would lead people to believe that everyone is carpooling except "those people that think they're too good." At the start, sound arguments would not be as important as the image created. Maintenance of carpooling behavior would rely on other techniques.

The issue of autonomy and integrity of individuals should be evaluated not in terms of which strategies of change are

acceptable, but rather, which strategies should be used when, by whom, and for what purpose.

All these methods of influence can be helpful in changing behavior. Certain situations might call for a specific response. For groups already living ecologically, (however that is defined,) information and values strategies may serve to strengthen that perception. Groups involved in activities that work against a wise use of natural and human resources may respond best to operant conditioning. And those groups that seem confused, unclear, and emotional about environmental issues might be better persuaded and cajoled than other change strategies.

Kohlberg has developed a framework of moral development that could be used to evaluate which techniques to use when. An individual is seen as moving through six stages of moral development, from punishment and obedience to a universal ethical principle orientation. Environmental education could be seen as developing the sixth stage, in which behavior is determined by principles of justice and equality of human rights. The behavior of such individuals would reflect sound environmental decisions. If this model of change to environmental behavior is adopted, then each stage of moral development might be more responsive to one method of change than another. The type of change model used then, would be dependent on the level of moral development of the individuals to be changed. Working under this model

raises different questions about the autonomy and integrity of the learner. What environmental behaviors would characterize the sixth stage of moral development? Who would decide? Who would control the changes? Who would need to be changed?

Toward what end or what purpose, or in pursuit of what values will control be exercised?

Concentrating on which methods are inherently moral serves only to reduce the effectiveness of the influence attempt. Too often the ethics of a method is evaluated by how poorly it works. Such a perspective serves to maintain the status quo, by insuring impotent attempts at change. Perhaps the ethics of any method of influence is determined by its goals.

Environmental education might have as its goal the clear understanding of certain environmental concepts. These would focus on the idea of a closed system, the biosphere, populations, technology, environmental decisions, and an environmental ethic (Stapp). These categories involve ecological facts and concepts of social responsibility widely accepted.

Environmentalism could strive to develop rational, feeling individuals, trusting their decisions to be environmentally sound. Stress should be placed on developing critical thinking and clarification of values. It could highlight the importance of knowing how an individual's behavior affects the quality of life in the future.

What if environmental education is essentially not concepts nor thinking skills but a way of life and behavior above all else? A way of life that stresses the development of individual autonomy and integrity? The implications of this view become evident when an educator, whose goal is trying to influence someone, is also concerned with protecting the individual's ability to reject that influence attempt, and to evaluate the goal the educator is advocating. Conflicts over which goals should be worked for would inevitably occur. Carl Rogers avoids this dilemma by advocating goals designed to develop the total human being. The person, no matter who controls, is then left with decision-making ability. Use the increasing power of control to create individuals who will not need and perhaps no longer respond to control (Rogers-Skinner). But the educator is still determining goals and proper procedures.

Who will be controlled?
Who will exercise control?

It might not be unreasonable to picture a self-governing person who is both aware of and affected by manipulative methods. Autonomy and integrity would then rest in the ability and opportunity for that individual to exert counter-control.

The educator must then deal with substantive ethical questions. He or she must be willing to encourage the learners to select for themselves their own goals and to operate under

egalitarian situations. A reevaluation of learning situations must take place.

Here the issue around who controls whom must be addressed. The question of autonomy and integrity is really one of power. The distribution of power in a classroom or in a society profoundly affects the autonomy and integrity of the individuals involved.

What group commands the power to define goals and strategies? Who defines the groups needing to be changed and how they must be changed? The structure of the setting of instruction and the allocation of teaching roles currently determines who controls whom. The amount of rigidity in this interaction of learner and educator decidedly affects the amount of autonomy allotted to the learner. The idea that seems to be implicit in the process of developing autonomy is the equalization of controller and controlled. This represents major organizational and societal change.

The classroom can be used as an example of how distribution of power to determine goals and strategies interacts with feelings of autonomy, integrity, or oppression. The same process of evaluation can be used for any societal structure.

The teacher role involves setting the agenda. The choice of what information to present begins to move the instruction in a specified direction. The ideas and outlook of the instructor color the material being studied, no matter how hard objectivity is striven for. This forces a continual

dilemma upon the teacher today. Who should control the role of agenda-setter? How should the role be allocated?

The willingness of the teacher to share the control is usually dependent on his or her interpretation of the learner and the goals of instruction. Too often student autonomy is narrowly condoned only until the goals of the teacher are challenged. This difficult situation is usually resolved by delegitimizing the goals of the student, labeling the student young, immature, emotional, radical, aberrant, foolish, or delinquent.

Student autonomy would mean the right to determine work activity on personal judgment. The learner is encouraged to maximize his or her input into what will be studied. This does not have to mean complete unaffected learning behavior on the part of the student, for that is being shown to be unattainable. It does, however, imply challenges of what is being taught, and individual assessment of the material as well as teacher assessment. To the extent that this interaction of student-teacher-material is real, the learner is in the position of controller. The autonomy and integrity of both student and teacher, learner and educator, might rest on the degree of legitimized and effective decision-making ability allotted to each.

The issue of the autonomy and integrity of the learner, then, involves much more than a choice of techniques of influence. It involves facing what unequal opportunities to

influence mean. It involves challenging not only methods of control but also the assumptions underlying who should control whom for what purposes.

These four questions concerning the control of human behavior serve to highlight the problems the environmental educator must begin to resolve around the concepts of autonomy and integrity of the individual. What type of control will be exercised? Toward what end or what purpose, or in the pursuit of what values will control be exercised? Who will be controlled? Who will exercise control?

Education and society today must be assessed by these difficult questions to determine the amount of autonomy and integrity each individual now has. Environmental education must also begin to formulate answers to these questions that will be consistent with the values it resolves to hold. How these questions are approached will determine who will feel comfortable as an environmental educator, what skills will be required, and the future direction of the field.

Key Questions

1. What skills in behavior change should environmental educators and learners alike experience?
2. What determines the autonomy and integrity of an individual?
3. How should the different models of behavior change be evaluated?

4. What are the benefits of clarifying the positions of those opposed to your personal view of what environmental education means?
5. It is easier to influence those people whose attitudes toward something are not yet solid. What does this mean to the use of value clarification techniques and environmental education?
6. Should values be clarified if they will result in behavior that directly works against environmental goals?
7. Who should control reinforcers if operant conditioning is used in attaining environmental goals?
8. Is the admission of a bias enough to offset its effects, or is it a powerful persuasion tool?
9. How effective is each model of behavior change? When?
10. Does environmental education incorporate a moral stand? What is it, if it does?
11. Can personal value examination bring people to arrive at basic ecological and humanistic perceptions? Is it practical to teach environmental education that way?
12. How much is environmental education a way of life and not a subject?
13. If the lifestyle of environmental education's beliefs is somewhat contradictory to the dominant society, to whom does the educator hold him or herself accountable?
14. Toward what end or what purpose, or in pursuit of what values will control in environmental education be exercised?
15. How will the issue of control of goals of environmental education be decided?
16. What is the relationship of autonomy of an individual and power?
17. How much of an effect should an egalitarian viewpoint have on determining the goals and processes of environmental education?
18. How should the teaching role be allocated in environmental education?

19. What behaviors describe student or individual autonomy?
20. What is the relationship of societal change and environmental ed?

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A wide-ranging report on the fast-spreading, impressively effective use of Skinnerian psychology to change behavior in classrooms, prisons, nursing homes, factories, community mental-health centers, stores, and in the house next door.

3. Grear, Michael J. "Integrating Skinnerian Concepts of Human Behavior Modification into the Environmental Education Approach" 1973 Master's Thesis. University of Michigan.

Is the pervading assumption that the environmental problems resulting from man's behavioral patterns will be solved when we correctly educate and change our fellow man's beliefs, attitudes, and values a valid one? This paper focuses on the benefits of changing contingencies of reinforcement, not values and attitudes. By converting long-run advantages (reinforcements) to short run reinforcers, behavior that is consistent with long-range payoffs can be encouraged.

4. Hall, Elizabeth. "Will Success Spoil B. F. Skinner?" Psychology Today. November, 1972

By keeping controllers benevolent and giving control to the subject, society can become more democratic and humane. Admitting to the presence of social forces controlling behavior opens up new ways to use knowledge of human behavior.

5. Skinner, B. F. "Freedom and the Control of Men" American Scholar. Winter 1956.

Challenging the notion that freedom is absence of control, Skinner proposes freedom as knowing what is controlling and how to exert countercontrol.

6. Ulrich, R.; Stachnik, T.; Mabry, J.; Control of Human Behavior Englewood, N.J.: Scott Foresman, 1966.

Articles by Krasner, Grunbaum, and Skinner relate behavior modification to social responsibility, culture, and society.

Interview Questions:

1. Overall, what reactions do you have to the working paper on environmental education and learner autonomy?
2. Is there a special relationship between environmental education and the egalitarian perspective toward learners? If so, why?

How is your own attitude toward learner autonomy reflected in your behavior?

3. Does respect for learner autonomy conflict with the goals of environmental education as you see them?

Do people have a "right" to hold environmental values of which you thoroughly disapprove? How can you confront or change these values while still respecting the learner's autonomy?

What do you do when faced with such a situation?

Is it an acceptable "out" to use manipulative teaching strategies with the goal of increasing the future autonomy of the learner?

4. What teaching approaches do you reject as inconsistent with egalitarianism?

How do you feel about Skinnerian behavior modification in environmental education?

What about persuasion and appeals to the non-rational needs of the learner?

What about values clarification?

What about the use of conflict, homogeneous subgroups or caucuses among learners, and the like?

Are lectures respectful of learner autonomy because they stress objective information, or do they threaten learner autonomy because their style is authoritarian?

5. Can a teacher respect learner autonomy when the teacher is powerful and the learner is relatively powerless?

What have you done to equalize the power between yourself and learners? What can you do?

Interview Participants:

Bill Casello
Alice Cummings
Judy Gingert
Jerry Mander
Pete Sandman

J. Gingert:

I feel I have an advantage because I wrote the paper and I'd like to know what you think first. This whole ethical question of should we control behavior really confuses the issue. So I would like to focus on how we can better identify who's controlling whom and how we can make this control more equal. That's what I think autonomy is. That's what I think integrity is. Freedom.

P. Sandman:

Part of what I'm hearing is for you the way around the problems of control is to equalize power. And if somebody has roughly as much power as you do, then everything is neat and you can try and control them and they can try and control you and the autonomy comes in the parallelism, in the fact that both are powerful and both are attempting to control. I think that's neat except much of the time I live in a place where there is not equality and it isn't a real option to me to make my students equally powerful in their impact on me as I am institutionally powerful in my impact on them. I worry about control because I have a lot of power in those settings and it doesn't help me to say well, if you didn't have a lot of power you wouldn't have to worry about it.

J. Mander:

That's between you and your students?

P. Sandman:

Right.

J. Mander:

You know this morning you and I were in the same group, you were describing your frustration dealing with the support system you have to relate to which is the university and the Office of Environmental

Education. You were wondering how to affect that. How to equalize power between you and the system that supports you. In a way you were the student and it was the teacher. So if that's the way the whole thing is structured, like at every level it's one on top of the other, how do we interrupt that process? Because for me as an environmentalist, you know I come from a basic reading of nature as being a democracy of life forms in which there is no question of power and domination. That it is a flow process and every living thing gets to express itself at some level and interact and die and change. But pretty much I don't see any hierarchy in nature. Some species will tend to dominate in a certain area, but there's no hierarchy of life. It's like all of them fit a piece of the system, so that democracy seems to me to be the prevailing form, that only we have gotten in the way of. So when you try to behave ecologically it's also behaving in an egalitarian fashion. I know I told the story about how I was in business and there are a lot of contradictions about that. One of them had to do with this issue of power and I realize I was able to put my view of the world out really easily by being in the advertising business. And even now I'm a writer and in political matters and I have access to the media and I have a lot of power. I mean I don't have as much power as I ought to have. But it's like I have more power than 99% of the people do in terms of being able to say my visions of things. I have had to confirm at all levels the justice of that. I basically feel it's unjust and part of my work is to get out of the way of that and whenever it's a possibility give it up and let some other form operate. For me all environmental questions, all political questions finally turn on whether or not that process is done by every person.

J. Gingert:

It seems like we're getting back to the point of are we going to play the game better or are we going to play in a different style? Are we trying to get power to outdo those that have it now or when you have it are you just going to distribute it which is a totally different perspective.

B. Casello:

By my philosophy I prefer to believe that a bad decision made by a plurality is better than a good decision made by a small group of people who are governing their destiny. That's where I ran into trouble at the free school. I thought that a group of students wielding the power and making decisions, pushing their will onto the majority of the students, was no better than the faculty. As I was the director of the school, I got into the political thing and I was pushing the point of view many of the students had but were not fulfilling and not very strong and my own view that there should be a structure in the school, and there should be contracts, credits and things the kids would need if the school fell through which was a very possible thing. So I pushed my politics hard with the kids and they resented it because I had tremendous power. I had more power than the group of students because I could wield the silent majority and I did have the position with the administration. So they held a crooked election and I lost the election by the students. I was thrown out by something like 40-39. I later found the ballots and found I had won by 43-39. The upshot of it was an oligarchy emerged and started an alliance with another teacher and this group of maybe 11 students. They were making the policy which by the way changed every week and was kind of chaotic. The upshot of that was it created another school because the political aspect of that school was too much for most kids to handle, so the administration decided they would create another school to make that large number of students who were

not politically active have a place. The eventual upturn of that was the faculty that came to school wrested control away from the students and the students lost that power. All students lost that power and they have virtually no power on any major issues at the free school now. They have a lot of freedom of their own choice to govern their own destinies, but they have very little to say about policy in their own school. No more to say than our school does and it's also faculty-run. We went through a point where we had first the superintendent running it like a puppet, then we had the faculty in control and now we have the new dean and assistant dean wresting control away from the faculty. And the political struggle goes on and on and I don't like any of these because no way do I feel the majority of the students are having the voice. In any thing I get into, I keep coming back to this, how do you get more people involved in this decision-making. It's fine to be able to give a student or learner enough independence to plot his own course, but where does he start working on other aspects of his program besides just what he is going to take. I don't have the answers. I hope today we'll find them. But I'm looking for a way we can get more people involved in decision-making.

A. Cummings:

I'm going to start by saying I don't think there is any true egalitarianism, but sometimes to begin with the guy who thinks he's got the power is a real pompous ass and the real power is at the local level that has outsmarted him. I don't like either one of those extremes. I think it's a really inhumane set of circumstances and I'll fight harder if I'm the underdog than I will if I'm top dog. If I'm top dog, I'm much more apt to give you a voice, at least to listen to you, but I think we must all realize that there are levels of experience. There cannot be true egalitarianism.

- J. Gingert: Underdog, level, hierarchy.
- A. Cummings: That is the situation where I find myself today whether or not you like those words. I deplore them every day. I argue with myself before going to work. But I have to outsmart the system. Because they're not doing things right.
- B. Casello: But we're part of that system. And we never seem to have any impact.
- J. Mander: Well, I think in this country we don't know how to equalize power. Within a system that does nothing to encourage the sharing of power, it's in fact encouraging the opposite thing--the whole point of it is to get ahead of the next person and gloat because you got ahead and enjoy the fruits and to keep it. The system is totally structured to make that happen. Public Interest Communications is this non-profit group I'm part of that is collective. It's got nine people in it and it functions totally collectively. Everybody gets exactly the same amount of money which is very small. Decisions are made as a group and it's a mess. None of us knows how to do it properly. But the way we are relating to that is none of us knows how to do it because we had no training in how to do it. And we don't know how to do it because my entire life up until three or four years ago was operated by a perception of the world that was hierarchical. That did have to do with power. My assumption has always been a standard liberal assumption which was that everything is going to be okay if I get the power.
- B. Casello: Yeah, right.
- J. Mander: I'm going to take care of everybody. Everybody says that, but fouls it up when they get the power. After awhile you have to look at what the process is. Because when I got the power at this place I really did

foul it up. I got the power by force because I'm good at getting power. I got it by force of personality. It was collective, but I had the power at a certain stage. People finally got together and said no you can't have the power. That was a terrific thing and for me it was a crushing blow.

P. Sandman:

What Public Interest Communication does, that I'm familiar with, is that it produces and disseminates advertisements. The set of advertisements that you've done that I'm most familiar with is a set of ads about energy. Okay? Those ads are on behalf of the public interest, i.e. as opposed to the oil industry and to the manipulation of public opinion by the oil industry. I don't see them as less manipulative than the ads they are opposing. I see them as on my side and I welcome them. But do you see the products of Public Interest Communication--the advertisements--as an effort to share power or an effort to use power.

J. Mander:

Well, I'm really hoisted on that one. I think all use of advertising is immoral for any purpose at all. Yet I do it. Basically I don't know if it's worse that we do it or better. But since I'm doing it I wind up--and I'm writing a book that is essentially a media thing that will attempt to influence people's minds and so on--I'm filled with contradictions. So it's like, there's no good answer to that.

P. Sandman:

For me that's a clue that sharing power may be the wrong question. Maybe not. For me the issue comes down to the use of power, can you use power humanely, can you use power not to dehumanize the people you are using your power on and Judy's original question, can you use power somehow in a way that seems to lead to encourage people to take some of that power away from you. But even that is different from giving it to them or

declining to use it and even that strikes me as futile and arrogant. It's a very kind of arrogant thing to say I have enough so I can afford to give you folks some.

A. Cummings:

The put-down of them all. Maybe we are leading people not necessarily to change power but to assume a role through a process. Recognizing that they start at low level, but they are growing and you are listening. I don't know how many of you have had your opinions changed when you really thought like as a mother--now just wait a minute, let's look at this. It's a very highly educating process. And I've changed my opinion. And I guess that's what I'd like to see happen. I like to listen to everybody. But I admit like you, I've been in your rat race too--advertising--if you're smart with the words you can manipulate people and it isn't quite moral.

J. Gingert:

Why not?

A. Cummings:

Because I am superimposing my will and I am not listening to theirs at all and who's to say I'm right. I'm being arbitrary.

J. Gingert:

No, but everybody else is trying to impose their will on you.

A. Cummings:

No, but you see I think I'm stronger.

J. Mander:

You're participating in the structure that produces the problem. I mean, it's like you are the problem at that point. I mean I feel very much that way.

J. Gingert:

You've got to impose your will?

J. Mander:

Yes.

A. Cummings:

Any time you manipulate that's precisely what you are doing. And you can manipulate in many ways.

- J. Gingert: But everybody is trying to impose their will.
- A. Cummings: No, I don't agree with that.
- J. Mander: There are lots of societies where people don't impose their wills. Society has a much looser form and wills don't get formed, they get sort of arrived at by consensus forms. There are lots of examples of that
[At this point staff control over the conference and the role of the research assistants were discussed as examples of the alienating effects of power. The goals of the conference--as seen by staff and participants--were also discussed.]
- J. Gingert: I see autonomy and integrity as the flip side of social justice. I'd like to know how to integrate them, rather than treat them as such separate issues. I had problems about not talking about one when I was talking about the other.
- J. Mander: I agree with you. I feel there is no justice without equality. Equality goes everywhere and has everything to do with everything. Wherever there is not equality, whether in a conference of a city or university function, it automatically implies someone has got the power and someone doesn't. I disagree with what Alice is saying. She thinks there's no such thing as egalitarianism. I don't think she means that.
- P. Sandman: Jerry, I'm buying that for a moment. What do you do with the power you've got? Do you try to exercise it for good rather than evil, humanely rather than inhumanely, or do you try and get rid of it as quickly as you can?
- J. Mander: You do both I would think. For me the situation has got a certain amount of

power which I spend a lot of time trying to divest myself of and expose. One of the things I attempt to do is expose myself and encourage people to expose me and to yield whenever the question comes up. To yield the power whenever it is possible to do it.

J. Gingert:

I have a real problem with that because I'd love to think that but it's not very practical. That's where my mind is, but I think if I really have to yield the power sometimes I think it's better not to. Just because changing the hierarchy is so difficult that maybe it's better. It gets into the whole conflict that maybe I should keep the power and try to use it well. I hear the question again and again and I don't know what to do with it.

B. Casello:

Maybe there's another way of looking at it too. Maybe people who have has power think they continually have to use that power. Maybe it's best to keep it to a certain point. I have a lot of power in my school. If I wanted to use the power, I'd have to buck eight very strong, competent women on our staff and I have chosen not to buck them because we are going pretty much parallel. I don't need to express the power I have in the school so I sit back and wait. When there's an issue I feel very strongly about, I'll use my power

P. Sandman:

Tell me ways you have found of using power and having impact without feeling you have made objects of other people.

J. Mander:

You're asking an impossible question.

J. Gingert:

I don't want you to worry about me. I'll take care of myself. Don't worry about my autonomy. I'll make sure I have it. You just exercise your power. Change the world. I think dealing with a question like you are, it feels almost

patronizing and it's a real problem because that's the way society is set up.

- P. Sandman: Your resolution of the autonomy issue is don't worry about other people's autonomy. Exercise your own.
- J. Gingert: That's not the resolution of the issue. That's what we've got to deal with. Why don't people exercise their own autonomy?
- P. Sandman: I see that as very different than what Jerry says about giving away power.
- A. Cummings: That's the first time I've heard you say it. I didn't read it in your paper.
- J. Mander: My answer to this is, it's a decision to make yourself on how to use power. For me my only role here is to say where I am at about power. You're going to have to deal with it one way or another. Other people say things to me about how I'm going to use power. Everybody uses power.
- P. Sandman: Where you're at about power is as exhibited by the last statement. You're not going to exercise it. We have some kind of opportunity to say to people here are ways I think you should exercise power and ways I think you shouldn't, and you don't want to say anything like that.
- J. Mander: That's the way I'm seeing it. I'm not going to tell you not to exercise power. I do think there is a value in not exercising power. I have been told by feminists that the best thing I can do in the world is not to do anything. It depends where people who say things are coming from. I took that criticism in a very deep way and in fact I do a lot less than I used to do. I wait for moments where it seems like it's necessary to do it. My use of power has changed

tremendously from what it used to be to what it is now. I exercise it in very specific kinds of contexts along very specific kinds of lines. I'm more conscious than I used to be. I don't see at this stage any point in not exercising any. I do agree that the people in power shouldn't exercise it. The people who don't have power should. . . .

B. Casello:

I certainly never would have thought of students being powerless. If you have ever been in a classroom where it is in an upheaval and one group is trying to exert their force against another, you feel it even more than ever. In many cases I've seen teachers back off completely and abdicate and let the students do this. The teacher may be up in front of the class and saying things, but the students do exactly as they please. They have no fear of repercussion. Then when there is no leader, or when the power is completely pulled away from the teacher, there is no teaching going on really. Fortunately, I think that's rare. In terms of this discussion on power, I think that there will be a balance in every classroom to a functional level. Most of the balance will be carried on the teacher side as opposed to the learner.

A. Cummings:

I guess this is back to my original objection to the word power. Because I guess power does connote an overpowering authority over a lesser individual which is something I resent.

B. Casello:

Let me give you an example of power exhibited by the students. This is when students come in and the teacher says there will be a test today. The students can beat her down and it ends up there will be no test, for one reason or another. Or when the teacher says this will be the grading scale and after he has put it on the board, one of the students after another changes his grade, changes the scale. That's what happens when

the balance of power is shifted. If you have a balance of power, the confrontation never comes about because both the teacher and the student have agreed from the start what the grades will be or when the test will be administered. The teacher may have given the lead or the students, but at some point there's agreement that this is where they both want to be.

- A. Cummings: Right, you started that a long way back. You don't wait till you get to a confrontation.
- B. Casello: When the power has slipped and the students have the power over the teacher you have this confrontation going on constantly. This is the disruptive student who goes to the bathroom four times during the hour or the kid who walks up and sharpens his pencil and it's merely a way the student is expressing his power.
- J. Gingert: Expressing his powerlessness--lack of power.
- B. Casello: That's entirely possible.
- A. Cummings: But at the same time it renders everyone powerless, if the teacher doesn't immediately move in. It erases all power at that point.
- J. Mander: The real power would be for the students to choose their teachers, subject, style of class, goals. . . .
- B. Casello: Tell me how do you feel about contractual studies where one teacher and learner sit down together and work out the whole program.
- P. Sandman: I think that's ideal. I'm comfortable in it. The only problem with it really is an efficiency problem of it being too time consuming, both the student's and teacher's. It's not a way the legislator likes very much.

B. Casello:

I'd like to make another observation that in at least 50% of the class it doesn't work because the contract seems to have the lowest priority. My kids I work with in independent study--16 of them, in 16 different subjects. One by one I hear the alibis--well, I had to do this reading for history or I had to get this project done to hand in. Can I put this off till next week? They have deadlines, where in my class it's between my student and me. I feel I'm down at the bottom of the priority list.

P. Sandman:

In a schoolroom full of jailers if you don't lock the doors it's hardly surprising folks won't honor your boundaries.

B. Casello:

When the attendance policy at the big high school went down the drain before there was any replacement, there was a year of limbo. I took the first advance and told my students that I'm going to make this a class you want to come to. If you choose not to come and you're able to meet the requirements that the rest of the class and I set up, you'll pass. If not, you'll fail. I thought, what a beautiful system. How can anybody not take advantage of this. Every kid that will be in my class on any given day is going to be there because he wants to know what's going on. It failed miserably. The kids cut my class to go to the parking lot, to smoke, to McDonald's simply because they knew in my class they wouldn't be penalized. Guess what? They were penalized because they failed to meet the terms of the agreement of how many points they would accumulate. They set the thing up and so many of them went down the drain because they didn't attend.

A. Cummings:

They were misjudging you. They thought you'd chicken out in the end.

J. Gingert:

What did you gain from it? Where do you think the problem is? If you had to do it over, where would you change it?

- B. Casello: I'd do the same thing again. Somebody had to give it a try. The students themselves learned from that.
- J. Gingert: You said I'm going to make this a class you want to come to. I am, not you. I would want to influence you not to say that.
- B. Casello: What I meant was I was going to do everything I could. But I didn't say we will.
- P. Sandman: Don't be talked out of that, Bill. It's an appropriate student ideal to consider the class his and take responsibility for what he's going to put into it and take out. It's just as appropriate for the teacher to consider it his class and take responsibility for what they're going to take out of it and put into it.
- B. Casello: I felt the students too learned something from that. . . .
- P. Sandman: Can a powerful teacher respect the learning and teaching agenda of students and still also respect his own teaching agenda?
- J. Gingert: Yes.
- P. Sandman: That's got to be what you try to do. That's not easy to do.
- B. Casello: It's not easy. When you come in with a beautiful lesson and something the student brings up becomes the lesson of the day, are you able to chuck your lesson?
- J. Gingert: Depends on how powerful the student is.
- B. Casello: I do it whenever I can. When something happens in the news and a student comes in and says did you see the Ann Arbor News last night and somebody else says it, then I'll chuck and we'll begin with what the kids bring in.
- J. Gingert: I don't think I have the choice whether it gets chucked out.

- B. Casello: It gets chucked out. I don't fight it and try to superimpose what I want to do.
- J. Gingert: That's a reprioritizing of my agenda.
- P. Sandman: I don't fight it if it looks interesting to me. If it looks uninteresting, I fight it.
- A. Cummings: Don't you also assess how important the knowledge you wish to give is? That has to be taken into consideration. If nonsense comes up and yours is far more relevant, maybe you'll accommodate partially, but not totally to the expense of a really vital concept being transmitted.
- B. Casello: Maybe times I've ended up with a classroom experience that had nothing to do with my subject matter, but it was the time and place to bring it up.
- A. Cummings: You made some decisions in yielding to that.
- B. Casello: Agenda-making is half of teaching.
- P. Sandman: That's where the power is. You're the only one in the room who walks in with a lesson plan.
- A. Cummings: You're the only one held accountable at the end of the year.
- J. Gingert: That's the other thing. Maybe that's what you should get onto.
- B. Casello: Teacher accountability?
- J. Gingert: Student accountability.
- B. Casello: We've always had student accountability.
- J. Mander: Only to the teacher, not to the institution. The students are not seen by the institution as being equally responsible for what goes on in the class.
- A. Cummings: They have an option to learn or not to learn. . . .

- P. Sandman: The question I'd like to ask, is there anything any of us would not do as a way of exercising our power? Be specific in things that are open to us to do, that we would like to do, that we don't do.
- A. Cummings: That's very difficult to answer, but I would never ask anyone to do something I would not be willing to do. I never say I'm up here and you're down there, and that's your role.
- B. Casello: I guess I have never intentionally embarrassed any student. I'm very careful of that one.
- A. Cummings: Not being sensitized to their personality. There are some kids you can never call on; they have to make their contribution in some other way.
- B. Casello: Some kids you can tease and others you can't. They like it. Others don't.
- A. Cummings: It's torture.
- J. Mander: There have been thousands of situations I've been in where I've not exercised my power. If my exercise of power assists others in some way to exercise their power, I'm more likely to do it if I think that only through my exercising power will it be able to start others doing it.
- B. Casello: I guess I'd put advocacy into that too without letting the student know you're advocating. You can be an advocate as long as you're fair about it and people know how you feel and you listen to the opposite viewpoint.
- P. Sandman: Is the reason for being fair because it's more effective that way?
- B. Casello: I think it is.
- P. Sandman: The tough cases are those where it turns out not to be more effective. Where you can get away with just running your side.

B. Casello:

It was terribly easy when I was teaching evolution to be sure the fundamentalists had their say. The kids who were fundamentalists would usually shoot themselves down and strengthen my point of view. Maybe that was manipulation. I did that in the guise of being fair and presenting both points. In my big class last year whenever I brought up an environmental point, I always made sure there was controversy around. I did show there were two sides of the coin and even though I didn't agree, that they should see where the other people were coming from. I also believe that strengthened my point of view. . . .

P. Sandman:

A seminar is a top notch show of behavior modification if you do it right. Controlling the environment is more effective and manipulative than controlling the participants. To give an example of that is hard. I've sensed from my own experience that other people have been able to rig the interpersonal payoff matrix in a conversation so that saying certain kinds of things paid off and saying other things didn't. Whether that's Skinner's or not, it sure modifies people's behavior. It passed for egalitarianism.

B. Casello:

I'm guilty of that.

A. Cummings:

When you talk about behavior modification, the assumption is that somebody is imposing this modification. I don't think behavior modification is necessarily an evil if it's a participatory arrival at the modification. If you're willing to take the risk, then you may be modified. But the concept itself is not a bad one. That's where value clarification fits in. We're looking at alternatives and have I really thought about my values.

P. Sandman:

It's claimed values clarification is value-free. You clarify your values whatever they are, and in practice that doesn't turn out to be so. People who are

clarifying your values have certain directions they want them to be clarified in.

- A. Cummings: Like you're doing it all wrong, do it my way.
- B. Casello: An example. Let's say I'm an alcoholic and society or my wife or boss have told me I have to have my behavior modified. Before I can modify my behavior I have to have my own values clarified. Why do I drink?
- P. Sandman: It's clear that Skinner says that's not so at all. The striking thing about behavior mod is that it doesn't have to happen in your head.
- J. Gingert: I don't see how you can have values and behave in a different way.
- A. Cummings: You can't truly if you have real values.
- B. Casello: Can a teacher operate in that kind of system? Where his behavior is different than his values.
- J. Gingert: I don't know. I can't.
- P. Sandman: Part of what grabs me about this issue of autonomy is that my behavior is so different than my values.
- A. Cummings: If you want to be truly moral and ethical and you have examined your values you will modify your behavior. I think realistically you must realize people do separate those. I'm not saying it's moral or ethical.
- P. Sandman: I suspect we're a lot more committed to our behavior than our values. We'll hang on to both if no one points out the discrepancy. If people do point out the discrepancy, we'll change our values. I don't think most of us would be willing to change our behavior on the basis of something like values. Teachers are committed to the way they teach the class. It's essential they announce goals.

If you point out to a teacher that the goals they have annunciated are inconsistent with the way they teach the class, they change the goals. People are always more committed to what they do than the reasons they say they do it. . . .

- J. Gingert: I'm out to decentralize, depowerize and deprofessionalize the field. I want to build into that criteria that will not let any group lay out what environmental education should be. That's my game.
- B. Casello: Very interesting. I didn't get that from your paper. What value will this be to the environmental movement?
- J. Gingert: It will give all sorts of people a chance to exercise their power.
- B. Casello: What if they don't accept that? Where will the power come from?
- J. Gingert: It will be in the hands of the people who exercise it. Who take it.
- B. Casello: But you don't want that to be the professional people. Is there a role then for the professional? What would it be?
- J. Gingert: Any other person's role.
- B. Casello: He's just one. One of many.
- A. Cummings: The problem, Judy, is that even with a so-called environmental ed consultant, environmental ed at this point of time has not shown people a real viable movement that will ensure people a real quality of life. How do you intend to deal with the situation? It's flagging instead of progressing because nobody has helped it to move forward.
- J. Gingert: Somehow I think we have got to develop an ideology that is different.

- A. Cummings: But who's to do it and how are we going to get it into people's lifestyles?
- J. Gingert: I'm going to do it.
- B. Casello: You're a professional and you're a mover and you're looking for power to do it. You're saying what you're fighting.
- J. Gingert: I don't have problems with deprofessionalization, decentralization and power. I think it's a different kind of power. I think it's what we've been talking about.
- P. Sandman: The people in this room have some considerable power over environmental ed because it's powerless. If environmental ed was a major input to the way people live their lives you bet GM would be sponsoring this conference. And we would all be checked to see if our values were consistent with GM's goals. It seems to me that there are some things wrong with the way we all live and I'd like to do something about it and environmental education is a way of doing something about it. A way that is open because it is fairly impotent. If environmental ed gets powerful before we get in it, we get rooted out. If we get powerful in it and it doesn't get powerful we're masturbating. I like decentralization but when you link that to getting rid of the power I don't like that. I want environmental ed to be powerful and I want it to be powerful in the goals that I share.
- A. Cummings: We really do have decentralization now. We need something to give the movement vitality so it can be decentralized in the way you expressed.
- J. Gingert: I want an ideology. I want to push for a heavy ideology.
- A. Cummings: Let's get it going, then we'll decentralize.
- B. Casello: Otherwise what we have is the counter-cultural response to environmental problems.

Going it alone, finding alternate ways, sharing among those they only immediately relate to rather than trying to spread it amongst a larger group, and the lack of power and leadership. That's what I sensed in the counter-culture as far as where it is and they are very probably the very most dedicated of all, but they have no impact on the rest of the world. I feel that might happen if we decentralize, depowerize and deprofessionalize.

A. Cummings:

Right now I see this mass of people out there wanting to do something and no leadership or mechanism of getting it into the schools. I believe we must change and each make our own determination. The system isn't getting me there. I want to give a jolt to the system so there is a way that decentralization can occur.

J. Gingert:

I don't see how you can jolt the system. . . .

Comment by Pete Sandman:

The discussion was extremely low-key. People responded to each other with attention and interest, but seldom with much passion. The participants seemed preoccupied by the morning's discussions and their satisfactions and dissatisfactions with the way the conference as a whole seemed to be shaping up.

The key issue underlying the discussion was the dilemma of possessing and using power without exploiting those with less power, especially as this affects the dynamics of teacher-student relationships. Many views were expressed--that teachers must give their power away to students; that teachers should keep their power but use it humanely; that power cannot be given away and students must take it instead; that teachers aren't really more powerful than students even now; etc. The problem of equalizing power and its relationship to social justice was extensively discussed.

Although much of the discussion centered on the manipulation of learners through behavior modification, subtle persuasion, and the like, these issues did not seem to capture the attention of the participants. Far more concern was expressed about dominance and coercion than about manipulation, and the participants seemed more comfortable with engineering the dynamics of a learning situation than with controlling them outright. This may reflect the group's concern about staff dominance of the conference itself.

The Relationship Between Environmental
Issues and Economics

By Namon Nixon in consultation with project staff

Is Technology the Answer?

Although this country has been able to place men on the moon, it cannot presently maintain a decent environment. The implicit premise is that the solution to our ecological crisis is technology. But technology alone cannot do the job. The population explosion, along with the increasing sophistication of technology, has produced serious problems which foresight could have prevented.

The environment and our non-renewable resources are both finite. Even the capacity of our environment to act as a "sink" for our total waste is limited. William Murdock and Joseph Connell propose three ways of dealing with the environmental crisis. The first threatens the environment in the short run, the second concerns ecologists themselves, and the third, which encompasses the public attitude, is a threat to the environment in the long run.

Murdock and Connell feel that technology is basically a system for manufacturing the need for more technology. Combined with an economic system whose main goal is growth, one can project how drastic the destruction of the environment will be. Technology merely substitutes one sort of pollution

for another. A finite world cannot support or withstand a continually expanding population and technology. There are limits to the capacity of environmental sinks.

Barry Commoner offers a similar point of view. He proposes that in most of the technological displacements which have accompanied the growth of the economy since 1946, the new technology has an appreciably greater environmental impact, and the post World War II technological transformation of productive activities is the basic reason for the current environmental crisis. Productive activities with intense environmental impacts have displaced activities with less serious environmental impacts, therefore Commoner concludes that the growth pattern has been counter-ecological.

On the topic of growth, Dennis Meadows and a group of assistants feel that unless zero growth rates of population and industrial production are attained by the year 1975, the result will be collapse of the planet's biosphere within seventy years. The only way to avert collapse is to achieve a global equilibrium, for technology alone cannot produce stabilization. The most dangerous and common reaction to the Meadows team findings was our technological optimism. Faith in technology can divert attention from our most fundamental crisis--that of growth in a finite world.

Meadows offers a possible cure for our dilemma--an all-out attempt to abolish exponential growth, starting in 1975. Population should be stabilized by equating the birth

and death rates. Industrial growth could be halted by investment in new, non-polluting plants. As the report states, "A society released from struggling with the many problems imposed by growth may have more energy and ingenuity available for solving other problems."

The Limits of Growth

Barkley and Seckler present another anti-growth perspective. They point out that as the resources for economic growth are consumed, they no longer exist as amenities. Man's total environment can be divided into two categories--that which is controllable and that which is not. The distinction between the two is purely conceptual, for in reality, any environment is a tightly connected system. The intended consequences of most economic actions are quite admirable. Their unintended affects are often quite destructive. Environmental economics can be called the study of the unintended consequences of choice. Growth does not come free, and one of the first prices to be paid is some encroachment on the natural environment.

The problems of resource depletion and pollution are one: they both are crises of growth in a limited environment. In the ULSL, growth has always been measured by changes in the gross national product, but GNP does not adequately take into account environmental considerations. The pollution

caused by economic activity does not decrease national income as measured by the accounts. In addition, if society is eventually forced to spend money to restore the environment, these expenditures also increase GNP. Modern industrial society has possibly reached the point where the direct benefits of economic growth are being overwhelmed by the indirect costs of environmental degradation.

An opposite view on growth is proposed by Crocker and Rogers. They reason that, given the wants most people appear to have, restraining economic growth may worsen instead of improving the state of the natural world. Attempts to curtail economic growth because of its supposed association with environmental deterioration may kill the best hope of improving the situation. To restrain growth now might impose giant burdens on future generations as they continue the battle for a better quality of life. They feel that lower growth now means lower capital stocks in the future. Lower stocks make any endeavor, such as pollution control, much more difficult. Ecological disaster does not necessarily come to pass with a reasonable free operation of the market and with economic growth.

The team of Hite, Macaulay, Stepp and Yandle suggest that very substantial amounts of environmental control and protection can be achieved without making any drastic or

revolutionary modifications in the functioning of the private sector of the economy or in the relationships between the public and private sectors. It is in the public interest to seek out ways to minimize the economic and political impacts of measures to protect and improve the environment.

If we approach pollution problems from the standpoint of economics or the standpoint of law, we can find no best solution to them. In pollution matters, we usually do about as much damage as we suffer. That is why pollution is a social problem, and why we must decide collectively what to do about it.

The question of who pays the costs of pollution is more of a moral question than an economic one. In reality, everyone suffers from pollution health-wise. To have a lower pollution index which is satisfactory, government economic burdens of pollution should not fall unjustly on the poor and the third world. Business should have an obligation to clean up the environmental facets of their production, and government already has the responsibility for caring for the welfare of its citizens. I do not feel that all consumers should pay equally for pollution control. If industry were to install pollution control devices, it would have three options:

1. raise the price of the product
2. appeal for a government subsidy
3. reduce corporate profits

To do any of the three items would tend to slow down consumption and simultaneously slow down our ever-increasing standard of living. The price increase is tantamount to a sales tax, a regressive form of taxation that hurts the poor more severely when imposed on necessities. The federal subsidy is not free of costs, for taxpayers will eventually pay it even if by a progressive income tax. The third option--lowering corporate profits, appears unlikely. It could raise unemployment because industrial expansion would slow down. The first alternative appears the most likely. Yet, this course of action would affect the poor more severely, unless we make special allowances or adopt new pricing mechanisms.

Business and Industry

James L. McCany supports the notion that business, along with government, has the best social instruments available for the preservation of our natural environment. Most businesses and industries have neglected the environmental effects of their production process. However, a few industries have already taken the initiative for cleaning up their effluents. In addition, many industrial organizations

are exploring technological methods for dealing with various types of pollution. New companies are evident whose entire business is pollution abatement or waste disposal.

The business community in this country and world-wide is faced with a particularly difficult choice at the present time. It can continue the economic goals of the previous decades until either an environmental disaster overwhelms us or governments and the public compel a change, or it can actively start a set of new approaches to production and industry, with a view to protect the environment, preserve our decreasing resources, and benefit our society.

The Population Concern

Implicit in any discussion on the relationship between economics and environmental issues is an understanding of the population problem. For the next half century the United States can cope with population growth with regard to our resources and the environment. An increasing population always leads to an increase in the use of our natural resources, more pollution, along with social conflicts among nations.

The real risk of population increase lies in the fact that larger numbers force us to adopt new technologies.

This view was established by the Report of the Commission on Population and the American Future. Population growth forces us to accept slow but irreversible changes in life styles. The basic point to be made is that continued population growth limits our options. To cope with continued growth, technology has to advance. Also, life styles must change. A slower population growth offers us the difference between necessity and choice.

In addition, other countries' population will simultaneously rise with ours. These countries will have to have an increasing amount of resources to cope with their population, thereby decreasing our import of foreign natural resources.

The developed nations of the world should start some constructive program to curb off their population since they consume so much energy. The advantages for such a program are plentiful. A stationary population provides for a higher quality of living, resources would then be spread more evenly, and we will have more supply (in the long run) and less demand.

Concerning the United States, third world people have a need to increase their population and technology simply for survival. The majority of population control in this country should lie mainly with non-minority groups.

Economics and the Politics of the Environment

One way in which changes in our economic system might be accomplished would be to develop a new economics of the

environment. The disparity between current methods of cost-benefit analysis and the real costs borne by society is even more obvious when the problem of industrial pollution is considered. Here it is evident that the benefit is usually the absence of a cost. These notions were stated by the husband and wife team of Paul and Anne Ehrlich. They state that one way to attack external diseconomics would be to require industry to internalize them. They would be forced to absorb the costs by laws prohibiting the release of any pollutants.

The job of cleaning up the environment will not be an easy one to conquer. Extremely powerful opposition will be expected from the economic concerns. In addition, the problem of preventing environmental deterioration caused by governmental agencies will almost certainly have to be attacked by changes in governmental structure.

In summary, I want to state my reasons why environmental education has not been as effective as it could be. Mainly the problem lies with the lack of a uniform agreement on the solutions to environmental problems. We all know the problems, but there is very little consensus as to the solutions. Environmentalists should communicate more concerning problems where a joint effort would be more effective.

The economic aspect of the environment has to be one of the movement's "mainstays", for it encompasses progress in relation to the Earth. The economic question is a part

of every topic researched for this conference. It has to be the main issue involved in the environmental movement.

Key Questions

1. Although a steady state (no growth) economy appears to be very advantageous for the environmental movement, it does not appear to take into consideration a growing population. The problem of unemployment seems almost certain. Do you agree?
2. The United States contains 6% of the world's population, yet we consume approximately 40% of total nonrenewable resources. As our population increases, so will our quest for productive resources. Some experts say that technology will save us. The question is, for how long?
3. There is some question over who is to pay for damages inflicted upon the environment. The government is supposed to watch out for our health, industry should pay the cost environmentally for their production, and the citizen is to blame for his greed and wastefulness. But who should carry the burden of the problem?
4. In all aspects of population, resources, and the environment, the restrictions imposed upon us by the second law of thermodynamics are very critical. Although the total amount of energy in the universe remains constant, the second law requires that the fraction of energy available to be used is continually being diminished. In essence, energy is becoming less and less usable. What can we do now to postpone this event from occurring?

Questions not Treated in Paper

1. Concerning the environment, does one generation have any responsibility for future generations? Assuming that the well being of the future generations depends in part on the quality of the environment they inherit from us, should we be concerned about adverse effects of waste materials both on the physical environment and on non-human forms of life?

2. Environmental improvement will be an economic disadvantage for many Americans. Environmentalists will be held accountable to provide ways to lessen the hardship. What are some ways to provide this type of assistance, particularly to poor and third world people?
3. The environmental problem, particularly in regard to the aspect of depletion of irreplaceable resources, is today considered as a global problem. But what about the distributional issue involved? Who has the power over the resources? With approximately 80% of the world's population in underdeveloped countries, how will and how should resources be allocated when these nations stop the U.S., Great Britain, and others from capitalizing their own resources?

Annotated Bibliography

I. Environmental Quality and Economics

1. James L. McCamy, The Quality of the Environment, New York, The Free Press; 1972.

An excellent book for laymen. Includes an overview of the problems of air, land, and water concerns. The author includes an interesting chapter on the fate of the entire world. In addition, there are in detail the institutions of social change--how they work and how to use them. Shows the contrasts and similarities between government and business. Professional efforts to possible solutions are also discussed.

2. James C. Hite, Hugh H. Macaulay, James M. Stepp, Bruce Yandle, Jr., The Economics of Environmental Quality, American Enterprise Institute for Public Policy Research; 1972.

An overall introduction of the presence of economics into the problem of environmental quality. Here the term environmental quality refers to the conditions associated with those resources that have not been assigned to the market for allocation. First is an introduction to the nature of the problem followed by an economic analysis of the problem.

Also includes the conflicts between economic development and environmental quality. The study takes the view that since the quality of the environment is recognized as a scarce resource, it should be treated accordingly.

II. Economic Aspects and the Environment

1. Robert and Nancy Dorfman, Economics of the Environment, W. W. Norton & Co., Inc.; 1972.

Concerns the economic aspects of current environmental problems. The contents are limited to the aspects of the environment that people seem to have in mind when they talk of the environmental crisis. Subjects are: the purity of air and public water, natural landscape, etc. Consists of twenty-six (26) articles by various authors. Section one encompasses nature and severity of problem and pointing out the main economic issues. Section two is basically technical. Section three concerns the pros and cons of the politics for environmental protection. Section four is about the difficulty of assessing quantitatively the damage(s) done to the environment.

2. Thomas D. Crocker, A. J. Rogers, III, Environmental Economics; The Dryden Press, 1971.

This book attempts to demonstrate that economic growth and environmental quality can both achieve satisfaction simultaneously.

Presents the basic economics of environmental quality. Also shows ways of correcting the operation of the market so that all relevant values can be recorded and weighed. Includes some of the physical economics. Shows linkages between the two aspects in question. Argues that economic growth is necessary in order to better deal with question of future pollution.

III. Economic Growth and Environmental Concerns

1. Paul W. Barkley, David W. Seckler, Economic Growth and Environmental Decay, New York; Harcourt, Brace, Jovanovich, 1972.

A study concerning when serious choices must be made between economic growth and environmental quality. It is intended to provide a framework within which

the growth versus environment question can be viewed. It examines how the advanced nations got where they are and what might be done to forestall continued deterioration of their environment. Calls attention to the important choices facing man as continued economic success imposes an even more serious burden of the natural environment.

2. Warren A. Johnson, John Hardest, Economic Growth versus the Environment, Wadsworth Publishing Co., Inc., 1971.

A volume of various statesmen seeing the topic as one in which the aspect of economic growth in a finite world cannot be maintained forever in a positive growth rate. Also focuses upon the feeling that current environmental conditions in the U.S. are serious enough to warrant consideration of ways to end our present dependence on economic growth. Provides a stepping stone for discussing the problem of reconciling the economic needs of society with the quality of our environment. An extremely interesting piece of work basically geared to those seeking an interdisciplinary perspective reconciling the rapidly growing requisites of ecology with the social sciences--economics, geography and particularly political science.

3. Dennis Meadows, The Limits to Growth, New York, 1972.

A computer-based study sponsored by the prestigious Club of Rome. The study attacks the problem-question of how long can population and industrialization continue to grow on this finite planet? The Meadows team took into consideration the major ecological forces at work in the world today such as human population growth, food and arable land, energy and physical resources, industrial growth and all the types of pollution to the environment. All of this data was fed into MIT's megacomputer. After thousands of different hypotheses through the computer, the end result is best summed up as "all growth projections end in collapse."

Interview Questions:

1. Overall, what reactions do you have to the working paper on the relation of environmental issues and economics?
2. Taking an economic perspective on environmental issues, what major problems and insights can be identified?
 - a. What are the major strengths and weaknesses of this perspective?
 - b. What value issues are raised by taking an economic perspective?
 - c. What complementary perspectives are needed to fully utilize the economic perspective?
3. In environmental education, should issues be treated from an economic perspective?
 - a. If environmental education emphasized this perspective, what would be the major concepts and methods which should be covered?
 - b. What topics would be emphasized in environmental education as a result of taking an economic perspective on environmental issues?
 - c. What are the advantages and disadvantages of environmental education emphasizing an economic perspective?
4. What type of an economic perspective should be taken on environmental issues? (e.g. need for pollution tax to deal with failure to internalize externalities versus democratic, no growth socialism to deal with endemic and critical problems in the system of production and distribution.)
 - a. What is your personal economic perspective on pollution?
 - b. In the case of pollution control, how should the topic of the cost of such control be dealt with?
 - c. Given an emphasis on an economic perspective, how should the topic of no growth economic systems be dealt with?

5. How should environmental education deal with the multiplicity of economic perspectives?
 - a. Should environmental education take a single economic perspective? Should an "objective" presentation of all the major perspectives be made?
 - b. What sort of assistance should be provided to students in dealing with perspectives different than the dominant ideology they have grown up with?
 - c. How should environmental education deal with the phenomena of corporations engaging in economic blackmail in the face of environmental standards? (e.g. air, water, occupational health, etc.)
6. As a result of the depletion of the finite supply of certain global natural resources, the absence of technological "fixes" continually increasing pollution, and continued population growth, what major issues should be focused on in environmental education?
 - a. Given the above global situation, should environmental education present its topics in any particular way?
 - b. What should environmental education be doing with the topics: economic growth, population growth, pollution growth, and resource depletion?
 - c. What if any actions should environmental education be advocating in the areas of these topics? (e.g. population control, steady state economics, etc.)
 - d. From your experience what problems will environmental education have in dealing with these issues?

Interview Participants:

Jim Crowfoot
Ruth Hepburn
Bob Roth
Bob Vogl
Elaine Wong

B. Vogl:

I thought there was some heavy criticism in the working paper "Environmental Issues and Economics" about technology which I don't always buy. For example, if solar energy becomes a reality in terms of its being miniaturized, maybe the whole issue of cutting down on energy consumption changes. I think one of the big things in terms of how we operate is the subsidizing of technology by government. Nuclear power plants are being opened essentially because of the subsidy from the government. It is very important to attack issues on that level. What technology is being subsidized? How do you assess its impacts both economically and environmentally before it is subsidized? I like increased prices, which may sound strange, in that I don't see them necessarily having an adverse effect on low-income groups. Increasing the price of cars might be to the benefit of those who would use public transportation. So that in some areas I can see increased pricing might be beneficial. The thing that I keep seeing, post World War II, the environmental crisis coming out of, is a reaction to the Depression. People really wanted jobs, material things and one way of doing that was to create this shortening of product life. They used to advertise cars in the 30's that we build them to last forever. We still have a 1930 Studebaker that refuses to die. They don't build cars that way now, by intent, to keep the economy moving, to keep employment high, to avoid the kind

of thing involved in the Depression. The question is how do you stimulate an economic system without destroying resources the way the present stimulation of the auto industry does. That I think would take some kind of genius to figure out. Where do we shift? It's a major shift. And I think it's all tied up with the thing of compulsory education. Keeping kids out of the labor force, getting workers out at earlier ages to open up jobs. It's a kind of contempt toward old things. I only see two ways to control people. One is the depersonalized system of economics, the other is a system of rules and regulations and centralized authority. Both of them have pretty bad impacts on people. The one I feel most depressed by is the rule system. Moving in a university I am amazed by the number of rules people keep inventing. You throw out the price system as a way of controlling behavior. If the substitution is rules it would drive me up a tree. There is a statement in the working paper that population control is necessary. The majority of the responsibility lies with non-minority groups. The Indians were presented as as endangered species. To me this is a very politicized statement because you're saying they need more numbers and what do you need more numbers for if it isn't political influence. The political influence for minorities is a major issue. There are other ways of getting political influence and I'm not sure that increased numbers is the best answer.

B. Roth:

There's one thing I think that needs to be clarified at the outset and that is the fact that whoever wrote this paper seems to not understand the difference between science and technology. Science is a knowledge-generating activity and technology is a knowledge-using activity. Having said that then it's really the way this technology is utilized that's being explored and not technology itself.

Technology is neither good or bad. If you run that out to its logical extreme you can say that you're not going to solve any environmental issues without using technology. That pretty well shoots down much of what is said in this paper as far as that is concerned. It's based on the wrong premises.

R. Hepburn: There can be humane use of technology. But I'm not sure I agree that there is no technology that is not inherently bad.

J. Crowfoot: Did you have any other major reactions, Bob, that you wanted to share?

B. Roth: I think the same one Bob raised concerning the non-minority groups. It's interesting to always place the blame on the other guy.

R. Hepburn: We're placing it on ourselves when we say that.

B. Vogl: Saying that certain groups have a need to increase their population and technology simply for survival, I don't buy it. First, I think they already probably have too many but the technological side is very bleak. You can go to Nairobi and see a beautiful city but you get 20 miles out of town and into the bush and no way do these people understand the living of those that live in Nairobi. Even the Catholic countries in South America seem to believe in birth control. Programs there have been even more effective than some in the United States. Again, that's another overstatement.

E. Wong: Well, from the discussion we had this morning, I think it would be helpful to me if everybody tells us a little about their background and what they can bring to our discussion on this economics question, because I don't really know that much about your backgrounds. My own perspective from working in Congress

means that I have to deal with some of the economic questions. So that's what I think I can bring to the discussion. I have to deal with the economics of it constantly. And also we can shape the legislative questions we deal with in an economic form too. I haven't read the literature but I have a couple of other things which might be useful like the Ford Energy Policy Project. Are any of you familiar with that? The Ford Foundation gave a \$4 million grant to the Ford Energy Policy Project. They're examining how energy can and will affect society and there is more grant money to have a number of projects. They also have designed three different scenarios for energy growth rate. One of those is the historical perspective, in which our energy use continues to grow at the 3 to 4% growth rate that it currently is. And they also have a technical fix scenario in which they cut down that historical growth to half through various means like mass transit, solid waste projects and other things. And they also have designed a zero growth rate scenario which when I read it was still in the fuzzy stage. They're talking about redesigning communities so that people don't have to drive cars to where they work. Another thing which I have only begun to read which I think is interesting is some work by Herman Daley and E.F. Schumaker. Herman Daley has been writing about steady state economy. E.F. Schumaker is a British economist who, it said in the preface by Theodore Roth, is probably in the same tradition as Paul Goodman or some people who are anarchists. Although I am not an anarchist, he makes a persuasive argument for decentralization. I've never even thought that much about decentralization as a way of slowing down birth rate. I haven't begun to explore the implications and ramifications. He also had a section

in there called "Buddhist Economics," in which he was explaining what economics might be from a Buddhist standpoint and that means that we try to keep in harmony with nature. You go for simplicities rather than complexities. I'd like some clarification on what it is we want to talk about. The two words "environment" and "economics" can send you off into lots of different places.

R. Herburn:

I think that's a good idea too. My reactions to the paper were mostly that it wasn't political enough and it didn't go far enough in terms of addressing structural questions. It seems to me that we can't avoid an environmental crisis if we continue to have a capitalist, patriarchal society that exists on growth and consumption. That's what we're faced with, so we have to look at the structural issues. There is a major criticism that I have about this paper. When we talk about economics we're going to have to talk about values too. When he talked about population he made an assumption, that a stable population would mean that there is equal distribution of resources, and it just isn't so. He makes that assumption and that seems to be something that we have to first of all check off and say it is not true and deal with what the ramifications are on that. I have a reaction to what Bob Vogl said in terms of whether price increases will somehow not affect or will not necessarily be negative to low-income people, and most of that comes from a time span. In your construct there's a long time span where eventually this price thing is going to be advantageous to low-income people because they'll have better public transportation. I don't think most lower-income people would or should accept that kind of eventual social justice. I don't think that's a very tenable strategy. Also, we were talking about distribution of resources and we were talking

about the economic system we were functioning in. We are also talking about an imperialist system that has ripped off other people's resources too, and we have to really address the question of imperialism as well as capitalism. To respond to what Elaine said in terms of clarifying inputs, it's hard to explain. In terms of background, as a historian I've obviously dealt with economics a lot, but mostly I'm a feminist and that has Marxist expressions and feminist culture kinds of expressions and those are the bases that I'd be starting with.

B. Roth:

Myself, I don't talk too much about the economics of environmental education. I thought this paper really showed the state of mind of environmental educators, which is very unsophisticated in terms of understanding economics. That's where our heads are. I'd rather stay on a discussion of economics and environmental implications. . . .

J. Crowfoot:

It seems to me that a way of focusing our discussion would be to describe your economic perspective. What are some of the major economic insights that people working in environmental issues should be cognizant of, that should be utilized? What are some of the insights that you would like to see environmentalists deal with? You identified one of them, Bob, as an understanding of the role of capital utilization as a major determinant of economic decision-making.

E. Wong:

I'd like to discuss the question of zero economic growth rate.

B. Vogl:

I only know what I hear from my friends that are economists and they say it's bad. The first thing that would happen is the price structure will go out of sight.

E. Wong:

I'm new to this but one of the things a lot of environmentalists are coming to

is a zero electricity growth rate because of all the pollution, water, air and land, that comes with building more and more power plants. We have to decide that we don't need to continually build power plants because that means we're going to need more coal, perhaps more nuclear power plants, whatever.

B. Roth:

The problem about the electricity growth demand is that it's rising faster than population growth rate, about three times as fast.

E. Wong:

I'm for slowing down the electricity growth. Maybe we don't need to use all of our electricity or the electricity we currently are using for manufacturing aluminum throwaway cans and bottles. We could save so much electricity by trading off, not using throwaway cans and bottles and putting that electricity to some other use. So when we do say zero economic growth rate I think that people haven't begun to do all the research to tell us what that's going to mean. Maybe we'll be including certain things into our GNP and taking some other things out.

R. Hepburn:

The pricing structure of electricity discriminates against low-income groups in favor of industry and suburbia. Change in the pricing structure would be a real discipline on the consumption of electricity.

E. Wong:

Well certainly we know we can conserve an incredible amount of electricity. The waste in industry has just begun to be identified.

B. Vogl:

The whole thing is complex. From what I read and understand, the rate of growth in the electric industry is a result of their rate of return being based on their total capital investment. Therefore the industry has a built-in bias to expand in order to increase profit. The other part of it is that the demand is greatest in urban areas and you see what they're using

electricity for in Chicago; you see a Sears tower. And then they are putting the power plant out by us, because it's too risky to put it in the city and 85% of that power is going to the city. I'm not convinced to what degree you need to slow down growth. I'm getting very suspicious of the kind of growth that occurs when it's concentrating people more in urban areas and it seems to be costing us more environmentally and socially. Decentralization might be much more effective.

R. Hepburn:

There are a couple of things that always bother me about decentralization. I don't know how we would go about doing it. How are you going to get the research and development to understand this potential development? How do you also address questions of the consumptive values of society which obviously have to be addressed if you're going to slow down growth? What do you do with those issues? How do you resolve them?

B. Roth:

I don't look to getting after people, you know, saying you're naughty you should use less. I look more to getting after media, and redirecting advertising as a way of reducing consumption.

B. Vogl:

Okay now take for example, power industries are really not advertising things like electric blankets and electric knives and four years ago they were. Why did they stop?

E. Wong:

For one thing some environmentalists were getting after them.

B. Vogl:

The other problem was one of delivery. They were getting more demand than they could cope with. Now there's another point to be made in relation to the power plant type of thing and that is the whole business of closing these various loops--sulfur dioxide, thermal waste and all the rest of this--and converting those wastes to some kind of resource. Technologically a lot of that knowledge exists and

and it is a matter of engineering application to make it happen. . . .

- E. Vong: I think another question environmentalists have to start talking about is "How are we going to start internalizing these costs?"
- B. Vogl: Industry says to pass it on to the consumer.
- J. Crowfoot: Redistributing wealth.
- R. Hepburn: Nationalizing power industries.
- B. Roth: I'm not sure whether we'll get control. In Russia they have engineers who get caught up in the same game and try to prove their own skills and enlarge their own sphere of influence, so they go on building these things. It might get us better control, but I'd like to see the states do it and play with it and watch them and see what happens. For example, everyone predicted the Oregon Bottle Law would be such a disaster, but I haven't seen that kind of data.
- B. Vogl: I think we need an effluent charge.
- J. Crowfoot: It seems to me basically that it's attaching cost to an accountable unit, and then the issue how cost is distributed is still an open question. . . .
- Are there any other kind of insights we'd like to add in terms of what we'd like considered by environmental educators?
- B. Vogl: Scarcity. What is the validity of the concept?
- E. Wong: Do you want to talk about whether scarcity is a real problem?
- B. Vogl: That's right. And how do you separate out the reality versus the scare tactic of it?

- E. Wong: What do you feel? Do you feel we do have problems of non-renewable resources; that they have become scarce?
- B. Vogl: It seems to me that when we talk about non-renewables, particularly as a general class, oil in particular, it is a scarce resource and there is a finite amount. At some point we're going to reach that finite line.
- B. Roth: Yes, but it's a very distant kind of time.
- E. Wong: Gosh, I don't think so.
- B. Vogl: By definition scarcity is real but in reality how often do we run up against it?
- J. Crowfoot: It's certainly important at all points as we approach this conceptualization, to qualify our generalizations relative to the affluence of the segment of population we're talking about. Certainly in a lot of societies today scarcity is a very different phenomenon altogether than in the so-called "developed countries." There's just flat out absolute scarcity. So I think it's important to qualify what the societal framework is when we approach the question.
- R. Hepburn: I think also one thing we started to respond to was a little bit too much reliance on technological fix. To argue that scarcity is not that important an issue; it's that same kind of technological fix argument that's been pretty unproductive.
- B. Vogl: The reason I have my suspicions about scarcity is how it's used to manipulate the role of public opinion and get policies favorable to the controllers of the resource. You look at what came out of the energy shortage thing and there's very little energy conservation. . . .

- J. Crowfoot: The whole issue of the decision-making mechanisms whereby capital investment decisions are made is very important. What should we be saying about those mechanisms whereby capital investment decisions are made? Should we be calling them to account, pointing out inadequacies with the decision-making mechanism?
- B. Vogl: I think that increasingly you have to watch on the federal level because of the kinds of interrelationships between big corporations seeking favorable policies on capital investments. I find the environmental programs I'm familiar with make very few links between local issues and what is going on in Washington.
- E. Wong: One other thing I'd like to explore, I was just reading through the pre-conference document and in the questions not treated in the paper it stated that environmental improvement will be an economic disadvantage for many Americans. I'm wondering if environmental improvement necessarily has to be to the economic disadvantage for that many Americans. Which ones are we talking about and how is that going to be happening? The way I see it if we really do begin slowing down our energy growth rate, slowing down our economic growth rate, that means really destruction of society in innumerable ways.
- B. Roth: There's the question of who is going to pay? If it's passed on in increased prices on consumer goods that burden will be disproportionately borne by the lower end of the continuum.
- B. Vogl: I would think that you'd have to follow the product. Some products wouldn't have an impact.
- B. Roth: It seems to me that the only place where that would not have an impact is where there is a substitute. Take for instance, transportation. In fact there was

mass transit available and affordable by low-income people then they would forego cars.

B. Vogl:

That's a very big and important one to look at because when you look at the steel industry it's terrible. You align that with the auto industry in its major importance in the society and the whole thing of planned obsolescence of automobiles. You've got a whole ballgame that could be redirected. If cars lasted twice the length of time they do, does that necessarily mean that low-income people are going to get it the hardest?

B. Roth:

Well it certainly seems to me that it does in the short term. Now if we talk about long term where the economic structure has made some adjustments to produce more durable cars and mass transit is operational, it's conceivable that those folks won't suffer.

B. Vogl:

But I'm still not convinced that it will, even short term. So many elderly people and young people just don't have good transportation at this point. If the cost of autos goes up 10%, I don't know, I haven't seen any analysis of how bad it's going to hit them.

J. Crowfoot:

I think there are analyses that show that urban-based low-income people are reliant to a heavy extent on automobile transportation as a means for getting to work and it's essential to maintain that mode of transportation. . . .

E. Wong:

I'd like to get back to that question of how it is that the poor are going to be really harmed by environmental improvement.

R. Hepburn:

Well, isn't the essence of that kind of harm going to be if we pass it on through the price system?

- J. Crowfoot: Also short-term employment dislocation.
- B. Vogl: Well, I don't think it is going to affect only low-income people, but I think they have the least to lose in some regard. You talk about a Ph.D. in physics, he's probably got about \$40,000 to \$50,000 tied up in his education. He'll never realize it if he can't be employed in the field for which he was trained.
- R. Hepburn: Well, big deal. I mean if I were a low-income person I would just hit you in the mouth.
- B. Vogl: But as a middle-income person from a lower-income background who has played the game and then suddenly the rules are changed, I'm going to be very angry too. I can get just as indignant over that and I have just as much right to my indignation.
- R. Hepburn: I guess I don't buy that you have just as much right to be indignant. There's a real qualitative difference between a have person changing into a have-a-little-less, and the big switch from a have-not to never having because all of a sudden there's been this reorientation.
- B. Vogl: Someone coming up to the middle class is going to be a very angry person and probably more knowledgeable about getting back at the system and more destructive to the system than the masses of low-income people who you might cut back 10%. I just can't write their feelings and their anger off. That's one thing that bothered me about the tone of the whole paper that looks at the oppressed as the target, and everyone else as if their feelings and their concerns aren't important. That makes for splits and divisions.
- R. Hepburn: I feel pain on the issue of the lack of control. People all across the board face a new lack of control in their lives and their destiny. The lack of control that folks in the professional class face around dislocation has very

different consequences than that for people at the bottom of the economic system. It is difficult, painful for a solid state physicist to find himself having to retool himself at this stage of the game. Most of those people have been re-employed, they have been retooled but the folks who are at the bottom of the labor pool, their situation in terms of lack of control and lack of power is a much more severe one in terms of not being able to retool. They are forced out into that residual 4 or 5 percent stable unemployment that is endemic to our economic system. . . .

E. Wong:

I think there is a major problem in that certain environmental educators don't feel comfortable talking about the economic base or see an economic base in some of the problems.

B. Roth:

My doctoral research asked environmental educators what should a student know about environmental management. I developed a national survey of 40 different professional listings in 24 different institutions across the country. In counting numbers of statements, principles, whatever you want to call them, I found there were 17 in ecology, 18 in economics. Yet ecology is supposed to be where it's all at in terms of environmental education, but in this national panel of 750 experts and practitioners in the field who responded, economics was seen to be of at least equal importance. What they are saying in effect is that economics is an extremely important area of environmental education and it needs to be strengthened. I think we tended to ignore it because most of us are not competent in this area.

- J. Crowfoot: It seems to me if more economics were brought to play more in formal education there would be the problem of which economic perspective would be better.
- R. Hepburn: How can that be avoided? It doesn't seem to me that it can be avoided.
- E. Wong: It's not a subject that can be avoided but it's a problem in certain settings.
- B. Roth: You've got to look at how other countries have done things and they're certainly not all socialist.
- E. Wong: But our country never has been able to deal freely with some of these concepts from an unbiased point of view. I remember the way we studied communism in one day in high school.
- B. Roth: I think it could be talked about and worked with in schools. I think of this new potential development as having to take some flak. I think it goes back to teachers being confident of being able to point out that this is part of the world. I found that is one way to handle a lot of controversy that otherwise you can't deal with.
- E. Wong: We're really asking for exceptional teachers when we bring in all these other things that we want people to discuss, teachers who really have a wide background. We want people who can teach the ecosystems, economics, political science, as well as anthropology.
- B. Roth: You can do a lot with well-developed materials for teachers. If those materials aren't pulled together you can't do it.
- E. Wong: We need to stimulate work going on in some local settings. There are people in the country in local settings who are

doing some work with economics. They need some support. A piece of that support is getting in touch with each other to do some exchanging. A piece of that support is being able to point to a document as they work with their state offices or administrators. Hey, I'm doing something that's very important. Being able to get small amounts of local support can help them out. I think there are a number of ways we could think of stimulating materials development, short of major infusions of dollars from the top, which result in grand projects like we had in the areas of science education.

B. Vogl:

But just the accumulation of case studies of economic impact, like the Oregon Bottle Law, is important. Surprisingly, the Wall Street Journal is fairly candid on a company's rationalizing of closing for environmental reasons.

J. Crowfoot:

There have been some very exciting stories in the Times and some other papers this week which have the makings of some fine case studies. In upstate New York they are in the process of municipalizing parts of the Niagara Power Company. They had a referendum that will result in taking that piece of Niagara Power and making it a municipal utility.

B. Roth:

Well, Jim, I think there's another issue in terms of stimulating production of these kinds of materials. One of the common practices is to define the areas in which you want the materials produced and then put out a notice of bid. You can target those to certain individuals, and one practice that's very common is to give it to someone that you would like to

develop the point of view that you want expressed. Now you may want to make it competitive and if you do you comply with the federal guidelines for that kind of contract, but you usually release information close enough to the deadline for submission that nobody else can really compete. It's happened to us a few times too. That bothers me. Maybe there's another kind of stimulation that needs to be done that would be tied to some kind of graduate level research, or undergraduate for that matter. Or maybe another segment of society could do some of this work. You take a few sensitive teachers who have been working with some of these issues and just create a circumstance to bring them together. A lot of good things can happen.

B. Vogl:

I'm really convinced that you've got to look for alternative modes of material development, alternatives to the system of going to certain key professionals and launching a special project in economics. I don't think that will yield us the kind of set of materials we've been talking about this afternoon. It's going to yield some materials that have much more in imprint of the past twenty years of the discipline on them. . . .

Comment by Jim Crowfoot:

The mood of this discussion can best be described as one of fatigue and cautiousness. Much of the participants' excitement and energy seemed to have been drained off by the first round of interviews, and the discovery in the morning of deep and important differences. This led to a cautiousness of approach in the second round.

One theme that was continually present throughout the discussion was the participants' awareness that there was no economist in the group. This fact in large measure determined the group's orientation to the interview, which was to raise general questions and concerns that they felt should be addressed by economics. The group seemed to be comfortable in doing this because of a deep conviction that the economic perspective was absolutely essential in understanding environmental issues and solving environmental problems.

Another theme in the discussion had to do with differences in values. These value differences seemed rooted in different interpretations of the meaning and implications of economic inequality in the United States.

The discussion was characterized by roughly equal participation on the part of the participants. While there was a generous sharing of "air time," the quality of listening and responding to the positions of others was lower

than one might have hoped for. The pattern was more one of stating one's own position and then allowing someone else to state a differing position.

CHAPTER THREE

The Rest of the Conference

This chapter reports events at the conference from Tuesday dinner, when the interview-discussions on the emerging issues were over, through Thursday lunch, when the conference ended. It is organized in chronological order. The issues discussed, in the order in which they appear, are as follows:

1. Development and discussion of check points relevant to formal education, support systems, and constituency.
2. Development and discussion of check points relevant to social justice, local-global perspectives, and economics.
3. Development and discussion of check points relevant to autonomy, skills, and values.
4. Formal education and guidelines for proposal readers.
5. Reproduction control and environmental education.
6. Survival skills for environmental advocates.
7. Proceedings, check points, and staff accountability.
8. Social justice and environmental education.
9. Conference evaluation.

After dinner on Tuesday, the participants came back together for the first general session since the opening one Monday evening. Several people commented that the day's

interview-discussions had been somewhat wearying. But most of the informal conversations during the dinner break had centered on the emerging issues, and the group as a whole was enthusiastic about exploring further the differences and similarities that had emerged so far.

The staff explained that the next task would be to propose "check points" for doing and evaluating environmental education, based on the nine emerging issues and the day's discussions. To do this, each participant was asked to pick one of three clusters of issues to work on: (1) formal education, support systems, and constituency; (2) social justice, local-global perspectives, and economics; and (3) autonomy, skills, and values. Each group was to spend the next two hours generating and discussing possible check points relevant to its issues. Wednesday morning would be devoted to cross-group sharing and further debate.

As it turned out, each of the three groups built a strong sense of cohesion during the evening's work, and wanted to continue that work for at least part of the morning. As a result, the cross-group sharing was limited to 90 minutes at the start of the morning session, after which the three groups met again to revise their lists of check points.

For each group, then, there are four items to report: (1) A summary of the group's Tuesday evening meeting; (2)

The document produced by the group for general distribution and discussion Wednesday morning; (3) A summary of the general discussion itself; and (4) A summary of the group's revision meeting late Wednesday morning.

Formal Education/Support Systems/Constituency

The group concentrating on formal education, support systems, and constituency consisted of the following participants: Anne Adamcewicz, Joe Chadbourne, Ethel Hackney, Willie Hodge, and Bob Roth. Bill Stapp was present as participant-observer. Most of the group members were interested mainly in formal education, and had attended the formal education discussion earlier in the day.

Bill Stapp stated the charge to the group: "Given the concerns of this group in relation to the issues of formal education, support system, and constituency, develop a list of check points for determining the effectiveness of a proposed environmental education program." When asked how they felt about the task, the group members were unanimous in wanting to do it. Perhaps because of the day's discussions, Monday evening's reluctance to "dictate" to the field had apparently disappeared.

The group started by identifying three sets of check points for the three issues in the cluster. It soon became clear that the three lists had many common denominators, and the group decided to produce a master list, organized around

topics such as: goals and objectives, needs assessment, literature review, procedures, etc. The participants then reviewed their recollections from the day's discussions in search of possible check points to add. Finally, the master list was reorganized by the group as a whole and each statement was scrutinized for clarity and accuracy. Joe Chadbourne agreed to prepare the final list for distribution the next morning, and Ethel Hackney agreed to chair the presentation itself.

The list of check points handed out the next morning read as follows:

1. Goal: State it clearly and show that it is consistent with PL 93-278.
2. Conduct a needs assessment of your constituency; show evidence that the target group needs what you propose; show how you determined that need.
3. State the objectives to meet these needs: What will the grantee do? What management process will the grantee use? How will the activity proposed affect the constituency (for example--skills, knowledge, feelings)?
4. Review related literature to show what you have gained from reported experiences; show what is going on in your geographic and subject area. Indicate the involvement of the target group, where appropriate, in planning the proposal.
5. Describe procedures for reaching each objective: What are you going to do? How are you going to do it? What is the time schedule?
6. Describe support: money/school system/professionals (environmental educators, staff)/students/parents/community/non-professionals/data base/ materials base/

communication/space/ transportation. Indicate contacts with related agencies to obtain support, and describe the results of those contacts.

7. Staff: Job descriptions; qualifications. Show proof of ability to relate to target group.
8. Evaluation: Involve participants. Specify procedures; plan the evaluation methods; use feedback to correct the program; conduct on-going evaluation and overall evaluation.
9. Budget: Make it realistic--do you have enough money? But don't pad it. Keep salaries consistent with area salary schedules. Provide funds to disseminate results to participants.
10. Disseminate the project results nationally: Describe the project products, e.g. film, publications, etc. Describe your plan to disseminate, e.g. NIE, commercial, ERIC, etc.

On Wednesday morning, Ethel Hackney briefly summarized the group's list of check points, while Joe Chadbourne handed out the mimeographed list. The group invited the comments of the other conferees, and said it was looking forward to integrating those comments into its list. The discussion that followed concentrated on two topics--salaries and the grant approval process.

On the salary issue, some participants felt that environmental educators should be willing to work for less than they often demand. Others argued that it is vital to pay environmental educators (especially in the inner city) as much as other (e.g. suburban) educators, in order to avoid a shift to alternative careers for economic reasons. The position that environmental educators deserve a salary that reflects their

professional training prompted the response that non-professionals should be hired too--on a sliding scale, said some; at the same salaries as the professionals, said others.

The discussion of the grant approval process revealed considerable dissatisfaction among the conferees with the way grants were typically handled by the Office of Environmental Education. The most consistent complaint was that grant writers are seldom told about the strengths and weaknesses of their proposals; another common charge was that an "inner clique" of proposal readers, selected undemocratically and not accountable to the field at large, controls the granting process. Time ran out on this discussion, and it was postponed until later in the conference.

When the group met again later in the morning (with slightly different membership), it decided to try to integrate the comments and criticisms from the general discussion into its list. The group also went through the lists produced by the other two groups for ideas relevant to the group task. Substantial progress was made, but the discussion faltered on the issue of values. After considerable debate, the group concluded that no consensus statement on values was possible.

When the discussion ended at noon, the group resolved to find time later in the conference for two tasks--to complete the revised check points, and to develop a set of guidelines

for the Office of Environmental Education to use in processing grant proposals.

Social Justice/Local-Global Perspectives/Economics

The participants in this discussion were: Jo-Ann Albers, Bill Casello, Alice Cummings, Judy Gingert, Bill Hansen, Jerry Mander, Michele Russell, and David Sutton. Jim Crowfoot was present as participant-observer. Several of the group members had not attended any of the three relevant discussions during the day.

The discussion divided itself into two fairly distinct stages. For the first hour or so, a small subset of group members maintained an intense conversation focusing on their discrepant perspectives on environmental education as it pertains to social justice, local and global perspectives, and economics. The second hour was characterized by a brainstorming session in which participation was much more evenly divided.

The group clearly contained individuals with major value differences on the issues under discussion. The quickest way to characterize these differences would be to say that some people were working from a liberal political ideology, while others reflected various sorts of radical commitments. Their interpretations of social justice, local versus global perspectives, and economics depended greatly on this ideological base. The group also experienced important differences in

rhetoric, and in willingness to engage in explicit conflict within the group.

The first part of the discussion focused on underlying diagnostic perspectives from which the participants looked at environmental issues. Among the topics addressed were these: Is economics at the root of environmental problems? Is capitalism inconsistent with environmental quality? What institutions or vested interests, if any, are the natural enemies of environmental quality? Should environmental education work on behalf of particular social classes or ethnic groups? Are environmental educators advocates? Are power and coercion appropriate strategies for achieving environmental quality? What is the individual's role in environmental problems and solutions, and in environmental education? Is environmentalism a manifestation of social injustice and alienation? What role should technology play? What should be the relative priority of protecting human beings from exploitation, as opposed to protecting the non-human environment? Who should set standards for environmental protection (and environmental education), and on what basis should these standards be determined?

By this time the conflict in values was clear, and the impasse seemed insurmountable. At least half the group had participated very little in the discussion, and one individual had claimed to be tired and left (this person later told the staff that the group had been dominated by "a few individuals who were running their thing"). Only five or six potential

check points had been listed, and even these were not clearly acceptable to everyone. The group decided to move to a brainstorming process.

There was debate at this point as to whether the list of check points should be partisan in nature, excluding from funding those proposals that fail to satisfy the criteria, or whether it should simply raise the relevant issues for program planners to consider. Concern was also expressed that the check points might be too general, or that they might be incompatible with each other. The group agreed to postpone these considerations until after the brainstorming process.

The brainstorming continued until the end of the allotted time. The uneasiness of the group's consensus was demonstrated by its difficulty in finding a spokesperson to present the results the following morning. Several very active participants declined for various reasons, and Bill Casello eventually consented to give the group's report.

The mimeographed list of check points handed out Wednesday morning read as follows:

1. Identify and amplify the relationship between our culture's basic way of thought--white, western, objective, technological, competitive, male--and an integrated, harmonious, and shared environmental responsibility.
2. Identify specific ways in which a project is accountable to a specified constituency.
3. Identify ways in which the proposed action is anti-sexist/racist/class-elitist.

4. Identify implications for the development of a steady-state economic system with companion redistribution of wealth.
5. Use an anti-imperialist approach.
6. Focus on the redistribution of power and wealth.
7. Identify the distribution of costs and make it non-regressive.
8. Identify the adversary--international capitalistic interests and local components; identify systemic illnesses that reflect themselves ultimately in environmental destruction.
9. Guarantee a decision-making role for those people most affected by any system of standard setting or trade-offs.
10. Identify who benefits and who pays.
11. Identify levels of coalition, competition, and capitulation.
12. Incorporate and identify a macroanalysis of the problem.
12. Evolve methods of building priorities and changing them.
14. Identify limitations of time.
15. Identify constituency outreach capacity and applicability to other interest groups.
16. Specify the relationship of program goals and the constituency served, and internal salaries and operating procedures.
17. Identify related issues not included in the program--defining what it is and is not.
18. Identify and rationalize levels of participation in environmental programs and policies of people who have been largely excluded: ethnic minorities, children, women, animals, plants, the elderly.
19. Analyze the program and solutions, positive and negative, in other cultural terms.
20. Apply nonexploitive principles of ecology to urban problems and human beings as well as the natural world.

21. Identify the program's dependence on technology for implementation.
22. Explain how the program contributes to human understanding of humans as natural forms, and thus fights homocentricity.

The group presented its check points at the general session in a very different way from the other two groups. Each participant was asked to pick the three check points he or she considered most important, and then endorse those three publicly by initialing them on a copy of the list at the front of the room. This proposal met with a good deal of resistance; one individual said he felt the task was coercive, and only a few began to do it immediately. The group then decided that participants could mark the check points they chose with an X instead of their initials, and slowly the remaining participants began to engage in the task. All but two conferees eventually came to the front of the room and marked the check points they personally favored.

When this was done, Bill Casello pointed out which items had the most general acceptance, and said the group would use this information in revising the check points. More general reactions were then solicited. The discussion turned quickly to the terminology of the check points, with many people criticizing the unclarity and rhetorical quality of terms like "imperialism." The implication was that most conferees accepted the proposed check points, but were uncomfortable with the vocabulary in which they were expressed.

When the group met again late Wednesday morning to revise the list, its makeup was somewhat different. Present were: Anne Adamcewicz, Jo-Ann Albers, Alice Cummings, Jerry Mander, Michele Russell, and Jim Crowfoot from the staff.

This more homogeneous group agreed unanimously that the check points were worth revising. Three additional points quickly achieved consensus: (1) The priorities expressed at the general session should be considered; (2) Words such as "imperialism," "racism," "sexism," and "classism" should be "translated" into terminology less threatening to a broad range of environmental education practitioners, but without diluting their meaning; and (3) A general expository introduction of some sort should be added to clarify the intent of the list.

Before the allotted time was over, the group appointed a voluntary subgroup to work on the revisions during the early afternoon, although this was not required by the conference design. A meeting was tentatively scheduled for three o'clock to consider the subgroup's revisions.

Autonomy/Skills/Values

Participants in the session devoted to check points on learner autonomy, skills, and values were as follows: Rod Allen, Dean Bennett, Bill Bryan, Ruth Hepburn, Alan McGowan, Chuck Roth, Bob Vogl, Doris Welcher, and Elaine Wong. Pete Sandman was present as participant-observer.

Several of the group members had chosen this group because they had participated in or heard the explosive session on values earlier in the day. They were there, they said, to fight it out again. Others saw this as likely to prove futile, and the group agreed to concentrate on generating check points instead. But the attempt at brainstorming ended almost immediately when some individuals proposed values to be endorsed by environmental education, and others objected vehemently.

About an hour was consumed debating the issue of value-centricity in environmental education. Among the positions stated and rebutted were these: Environmental education should not inculcate values, but rather should deal with the process of valuing and values clarification. Facts and skills are crucial in environmental education, not values. Environmental educators should be advocates for certain underlying values, such as the importance of a quality environment that does not exploit other people. Environmental educators have values, but should keep them out of the classroom. Environmental educators should advocate their values openly, not clandestinely. Environmental education should stress the fact that our values determine our perception of reality, and that the values of powerful people determine our reality itself. Value analysis in environmental education should be rational. Environmental education should present value options. There are no values that are or should be shared by all environmental educators.

Out of this acrimonious discussion emerged a "criterion of innocuity" for check points on values--only the most innocuous statements about values could achieve consensus. The only proposed check point that passed this test was that "students are entitled to have values," and even this one occasioned substantial debate. Other mild statements about values were added to the list over the objections of a minority, while most values statements were eliminated. Later in the discussion, several additional check points were added reflecting values about the process of environmental education. But the group was unable to agree on what underlying substantive values, if any, should characterize the field.

The discussion of skills was much less threatening to the group, and brainstorming quickly elicited a list of skills acceptable to the majority. Several skills proposals were rejected, however. The ability to put aside myths and concentrate on facts was rejected on the grounds that myths are often functional parts of cultures. Advocacy and organizing skills were rejected on the grounds that they implied a set of values that some group members did not share; for the same reason, skills relating to risk-assessment and personal survival in conflict situations did not make the list. A debate over whether the listed skills should be offered to all learners, or only to those who share the teacher's values, eventually resulted in the elimination of those skills that some participants were unwilling to share with everyone.

The group paid relatively little attention to issues of learner autonomy, except to propose that environmental education should contribute to the self-actualization of learners. Some group members argued that environmental educators should give their power away to students, others that they should use the power humanely--but the dispute was low-key.

At the end of the discussion, several participants complained that no one from the Office of Environmental Education had attended the conference, and expressed concern that the check points being generated might not be adopted by OEE. By this point (in contrast to the previous evening), nearly everyone seemed strongly committed to trying to influence the field through the check points. A discussion of the process for choosing proposals for funding ended the meeting. Doris Welcher and Elaine Wong agreed to present the list at the general session Wednesday morning.

The mimeographed list of check points that the group distributed to the participants read as follows:

The group urges the conference to consider the application of these proceedings: i.e., who reads proposals and whether the criteria developed will be utilized.

1. It is respectable and desirable for students to have values.
2. Values are verifiable by "objective reality."
3. Values influence behavior; it is desirable for students to be in touch with their values.
4. It is desirable to develop skills in problem recognition and solving, and to develop strategies for implementation.

5. Skills for synthesis of problems as well as analysis of problems are essential.
6. Programs must evaluate the structural sources of environmental problems.
7. Values influence the way people interpret "reality" as much as "reality" provides a basis for values.
8. Environmental education must recognize cultural relativity.
9. Environmental education criteria should include an opportunity for personal and community activism.
10. Educators should impart to their students the skills they employ--likewise, organizers and advocates.
11. Learners should have input in consonance with their learning level.
12. Learning should include an experiential dynamic.
13. Learning/teaching should encourage the development of self-worth.
14. Education involves the development of interpersonal skills--including and as a prerequisite to communication.
15. Environmental education should involve the teaching of "survival skills" for the individual. These include economic skills, building a support base for establishment and maintenance, and the concept of psychic survival.
16. An environmental education curriculum should contribute to self-actualization, a process achieved through the teacher in the position of a facilitator or positive manipulator.
17. Environmental education should increase the power of the learner to deal with the teacher and other traditional authority figures.
18. It is desirable to develop social power-building skills--with the mass media, in community organizing, and in data building.
19. Environmental educators should work toward the achievement of a humane ecological balance.

The Wednesday morning presentation began with an explanation of the conflict the group had experienced over values, and the resulting "test of innocuity." The check points on the mimeographed list were summarized briefly, and then the other participants were asked to comment.

The discussion that followed occupied considerably more than the time allotted to this particular group. Among the points made and debated were these: The group should not have "covered over" its conflict by stating harmless or obscure principles. The list is biased toward individual development rather than building a sense of collective self-interest or community identification. Community action and public education have vastly different goals and constraints, and no list can encompass the needs of both. Respecting the autonomy of students should not require forgetting the commitment of environmental education to social justice and environmental quality. The list is not clearly enough related to explicitly environmental problems and values. The list ignores environmental education in non-school settings, particularly workplace organizing around quality-of-life issues. The list is schizophrenic in its inconsistent faith in both objective reality and cultural relativity.

As this assortment of positions implies, the discussion was wide-ranging and somewhat disjointed. The vast value

differences among the conferees were clear to all; some wanted to try to resolve these differences in compromise, some wanted to continue fighting for their own values, and some wanted to embrace the very existence of the differences as evidence of the pluralism of our society and the diversity of our field. Only one point, raised again and again all morning, produced nearly unanimous agreement--that the Office of Environmental Education should rationalize, democratize, and publicize its standards and processes for judging grant proposals. Though the participants could not agree on many issues confronting the conference, they firmly agreed that OEE should consider these issues more seriously, with more input from various constituencies and with more feedback to proposal writers.

When the group (with slight changes in membership) met again later in the morning to revise the check points, it decided instead to continue debating the unresolved issues. What resulted was the seeming discovery that the group members (and perhaps the other conference participants as well) did not differ as much as they had thought in their analysis of environmental problems and the changes needed to solve them. The more fundamental differences concerned the role of education in achieving these changes: the ethics of education (should we impose our values?), the effectiveness of education (can we impose our values?), and the tactics of education (would we accomplish more with intellectual skills training?). Participants who had been steadfastly opposing

various value positions for a day and a half now asserted explicitly that these were their values too--as people and as environmentalists, but not, perhaps, as educators.

This newly discovered consensus led the group to a second agreement--that current and future environmental educators should spend far more time than they now spend considering the sorts of issues raised at the conference, especially issues concerned with values and social justice. Then the conflicts re-emerged. Some group members felt that strongly worded check points on these issues would help force environmental educators to consider them. Others felt that the issues should be mildly and tentatively treated in the check points, so as to seem less threatening. And still others felt that while the conference proceedings should address these issues, it would be coercive for the check points to do so. On this unstable and partial consensus--some agreement on what should be done, but much disagreement on whether and how people should be taught to do it--the session ended.

By lunchtime on Wednesday it was clear that many fruitful avenues of thought were hanging unfinished in mid-air, and that many of the participants preferred to continue working on these rather than moving on to new issues. The staff therefore decided to abandon its tentative agenda for the afternoon and evening. The plan had been to generate and discuss still more check points, this time for schools, mass media, and community

groups, and then to develop specific education projects (consistent with the accumulated check points) on energy, transportation, and pollution.

Instead, participants were asked to spend the entire afternoon in homogeneous groups of their own choosing, to continue work on whatever issues had been raised thus far that they wished to pursue. Among the possible candidates for this work, as seen by the staff, were: (1) Finishing the revised check points on formal education, support systems, and constituency; (2) Developing specific recommendations to the Office of Environmental Education for the processing of grant proposals; (3) Finishing the revised check points on social justice, local versus global perspectives, and economics; (4) Pursuing the question of what values and social diagnoses underlie environmentalism; (5) Pursuing the question of whether and how environmental educators should express these values and diagnoses without depriving learners of their autonomy; and (6) Finishing the revised check points on autonomy, skills, and values.

The staff did not list these pieces of unfinished business for the participants to choose among, but rather invited the participants to announce publicly what issues they wished to deal with for the afternoon. Roughly a dozen people stated a preference and tried, formally or informally, to attract a group to work with them. By two o'clock everyone at the conference was involved in a work session of her or his

own choosing; some participants were involved in two.

Wednesday evening was set aside for presentation and discussion of the afternoon's work. Several individuals and groups did not want "air time" to share their results. Six did, and they were scheduled for the evening session. The groups and their topics were as follows:

- (1) Formal education and guidelines for readers of grant proposals (Joe Chadbourne, Ethel Hackney, Willie Hodge, Bill Stapp, Bob Vogl, and Elaine Wong).
- (2) The reproduction control movement and its implications for environmental education (Bill Casello, Ruth Hepburn, and Doris Welcher).
- (3) Survival skills for environmental advocates (Bill Bryan).
- (4) The proceedings and check points, and staff accountability to the conference participants (Bunyan Bryant, Jim Crowfoot, Pete Sandman, and Bill Stapp).
- (5) A conceptual model for environmental education (David Sutton).
- (6) Social justice and environmental education (Anne Adamcewicz, Jo-Ann Albers, Bill Casello, Alice Cummings, Willie Hodge, Jerry Mander, Michele Russell, David Sutton, and Elaine Wong).

Because of time limitations, David Sutton's conceptual model for environmental education, developed by him and others at the University of California at Santa Barbara, was not actually presented at the conference. A copy of the model was posted on the wall of the meeting room for the participants to study at their leisure. Additional copies are

available; write David B. Sutton, John Muir Institute for Environmental Studies, 2118-C Vine Street, Berkeley, California 94709.

The five remaining presentations are summarized below.

Formal Education and Guidelines for Proposal Readers

Joe Chadbourne made the presentation for the group. He explained that the group had undertaken two related tasks-- first, to revise the check points from the formal education/support systems/constituency group, incorporating the other two groups' check points as well as additional issues raised in discussion; and second, to preface this composite list of check points with proposals for revising the grant-approval process of the Office of Environmental Education. A document designed to achieve these two goals had been mimeographed and was handed out to all conference participants. Joe Chadbourne summarized the document in considerable detail before the discussion was opened for comments and suggestions.

The mimeographed document, entitled "General Proposal Check Points," read as follows:

These General Proposal Check Points are addressed to OEE staff, proposal readers, and grant applicants. The proposal review process at present is not clear. It is inadequate and complete information is not given. The complete guideline-to-grant-notification process must be described. This includes the system for writing, receiving, reading, evaluating, and reporting proposals. It also includes the political process (e.g. OMB, OE, Congress)--who makes what decisions, and how.

Proposal readers should serve for no more than two successive years. In each year, there should be at least 75% new readers. Selection criteria should be representative of sex, race, geography, age, ideology, and experience. Publicize the list of these criteria.

The suggested grant criteria are the ten General Proposal Check Points listed below. In addition, OEE should indicate if its criteria include any of the following: a geo-political formula; a money (dollar) range (probably the number of grants to be funded); and "no-no's" such as equipment, salaries, or others; and the preferred use of funds suggested by OEE.

Evaluations should be noted by proposal readers and reported to the applicant whether the proposal is accepted or rejected. An appeals process, perhaps by telephone, should be considered. OEE should clarify when cash is really sent to the applicant. Finally, OEE should publicize the total results of applications, the amount awarded to each grantee, and the number of applicants rejected.

1. Goal: State it clearly and show that it is consistent with PL 93-278. Consider the philosophy behind these statements:

It is respectable and desirable for students to have values.

Values are verifiable by "objective reality."

Values influence behavior; it is desirable for students to be in touch with their values.

It is desirable to develop skills in problem recognition and solving, and to develop strategies for implementation.

Skills for synthesis of problems as well as analysis of problems are essential.

Environmental education must evaluate the structural sources of environmental problems.

Values influence the way people interpret "reality" as much as "reality" provides a basis for values.

Environmental education must recognize cultural relativity.

Learning/teaching should encourage the development of self-worth.

Education involves the development of interpersonal skills--including and as a prerequisite to communication.

Environmental education should involve the teaching of survival skills for the individual, including economic skills, building a support base for establishment and maintenance, and the concept of psychic survival.

The environmental education curriculum should contribute to self-actualization, a process achieved through the teacher in the position of facilitator or positive manipulator.

Environmental education should increase the power of the learner to deal with the teacher and other traditional authority figures.

Environmental educators should work toward the achievement of a humane ecological balance.

2. Conduct a needs assessment of your constituency: Show evidence that the target group needs what you propose; show how you determined that need. Identify ways in which the proposed action is not sexist, racist, or class-elitist.
3. State the objectives to meet these needs: What will the grantee do? What management process will the grantee use? How will the activity proposed affect the constituency--for example skills, knowledge, feelings? Identify specific ways in which the project is accountable to a specified constituency.
4. Review related literature to show what you have gained from reported experiences; show what is going on in your geographic and subject area. Identify related issues not included in the program--defining what it is and is not. Indicate the involvement of the target group, where appropriate, in planning the proposal. Guarantee a decision-making role for the target group most affected by any system of standard-setting or trade-offs.
5. Describe procedures for reaching each objective: What are you going to do? How are you going to do it? EE criteria should include an opportunity for personal and community involvement in real community problem-solving. Learning should include an experiential dynamic. It is desirable to develop social power-building skills with the mass media, in community organizing, and in data-building.

6. Describe support: money/school system/professionals (environmental educators and staff)/students/parents/community/non-professionals/data base/materials base/communication/space/transportation. Indicate contacts with related agencies to obtain support, and describe the results of those contacts.
7. Staff: Job descriptions and qualifications. Show proof of ability to relate to the target group. Identify ways in which the proposed staff selection is not sexist, racist, or class-elitist.
8. Evaluation: Involve participants. Specify procedures; plan the evaluation methods; use feedback to correct the program; conduct on-going evaluation and an overall evaluation.
9. Budget: Make it realistic--do you have enough money? But don't pad it. Keep salaries consistent with the area salary schedule. Provide funds to disseminate the results to participants.
10. Disseminate the project results nationally. Describe the project products, e.g., film, publications, etc. Describe your plan to disseminate, e.g., NIE, commercial, ERIC, etc.

The discussion paid little attention to the group's efforts to produce a composite list of check points, and concentrated instead on its guidelines for the proposal-evaluation process. The following points were raised: (1) The appeal process proposed by the group, which takes place after all available monies have been allocated, is inadequate to redress legitimate grievances--but how can appeals be heard before grants are made? (2) The OEE staff is inadequate for the large number of proposals received, and should be enlarged. (3) Files should be open so that people can see how proposal evaluators responded to their proposals and to the proposals of others, both those that were funded and those that were not.

(4) People should know that only one proposal in ten, roughly, is funded by OEE; Congress has not allocated enough money, and the President has not supported increasing the allocation-- but perhaps people should continue to write proposals anyway so that Congress and the administration come to see the need for more funding. (5) Proposal writers should be encouraged to take more initiative in finding out what happened to their proposals and why, and OEE should be more responsive to such requests. (6) The cash for projects that are funded should be available more quickly. (7) The criteria for funding projects should be announced at least six months in advance, so that proposals are not so often written at the last minute or without clear guidelines.

Overall, the participants seemed to feel that the group's proposed changes would greatly improve the way OEE processes projects. No consensus was voiced about the composite list of check points, but most participants seemed to consider it a satisfactory compilation of the agreements reached by the three groups.

Reproduction Control and Environmental Educations

Ruth Hepburn made the presentation for the group. She first handed out the group's lists of "questions environmental educators must answer" on the ramifications of population control, and of needed social support systems connected to population

control. In summarizing this document, she stressed that reproduction as an environmental issue had not yet been taken up at the conference, and connected this to our tendency to objectify the people we deal with (often using jargon) instead of looking at them as people. The handout read as follows:

Ramifications and consequences:

1. What population is controlled? Environmental educators functioning without the acknowledgment of the political reality/context of how birth control has affected differing population groups cannot begin to assess questions of impact.
2. In cases of involuntary sterilization, who are the decision makers and who profits from the decision?
3. What is the viability of a population building political power through population growth?
4. What are the implications of the above on the women of a given population?
5. What are the limits of societal institutions/approaches? What are the limits of education, and the limits of law, i.e., how do the courts function practically?
6. How would women be affected--in terms of status and function--if a ZPG ideology dominated without addressing questions of how women are legitimated by and in society?
7. How do developed social options (functions, status, power) for women affect the growth of population?

Requisite Social Support Systems:

1. Day care centers in schools and in the workplace at all levels.
2. Mechanisms for non-threatening counseling relationships.
3. Skills for access to the social system.

4. Recognition of adolescent sexuality.
5. Alternate sources of status for people other than children. Within capitalist/patriarchal society children often are the means (perhaps the only one) of raising and/or defining one's status.
6. Birth control research and education must be addressed to men as well as women. A top priority must be funding projects researching ways to control male reproduction.

The three group members then moved into a role-playing session. Doris Welcher took the role of a woman about 19 years old and four and a half months pregnant; Bill Casello played a doctor in an inner-city hospital; Ruth Hepburn interrupted the role-play occasionally to elicit discussion from the group.

As the role-play developed it was revealed that Doris was unmarried and living with her boyfriend. She had been to Dr. Casello before, and now resisted his urging that she undergo an abortion. The conference participants focused first on the power relationship between the two--his use of her first name, his contemptuous voice intonations, the role of the desk between them to preserve "professional" distance, his uncaring attitude ("Hello, Doris, I see you are back again"), her assertion that the time for birth control information had been four months ago and now she wanted the baby, his unwillingness to deal with that reality, etc.

Later, the role-play raised issues of trust and shame. Doris refused to look at the doctor directly; he insisted that she should trust him, but she was not willing to put her decision in his hands, which he resented. He became more and

more assertive, grossly invading her privacy with questions whose answers he did not need to know ("Are you still living with Bobby?"). In the end, he was patronizing and impatient, while she was discouraged and belligerent. He tried, though pompously and distantly, to comfort her, and urged the abortion on the grounds that he knew his business and that 20,000 women had had abortions. She responded that she wanted the child, and that four and a half months is a bad time for an abortion--a piece of accurate street information that he had tried to withhold from her.

A key dynamic in the role-play was the doctor's sense that he could and should talk her into an abortion, rather than laying out the options for her to choose. As one participant commented, it was almost as if he had a quota to fill. He withheld the information that it was a bad time for an abortion, and he was uninterested in eliciting other sorts of information from her--such as why she and Bobby were not married although they had a stable three-year relationship (welfare payments would be cut off). She was to him a statistic, and a depressing one at that, not a person with positive qualities to be acknowledged and respected. In reality, we were told later, Doris had the child, Bobby went into a training program, and later they were married. The doctor could see only pathology, not these strengths.

The discussion after the role-play concentrated on what role environmental educators should play in the issues being

raised. Should environmental education be training doctors who will treat their patients more humanely? Should it be training patients who will demand respect more effectively? Should it work to change the system in which such inhumane interactions occur? At a minimum, the participants agreed that environmental education cannot simply talk about the need for population control without dealing with the sorts of human realities revealed by the role-playing.

Survival Skills for Environmental Advocates

As a member of the group listing check points around issues of autonomy, skills, and values, Bill Bryan had earlier tried to raise the issue of survival skills for advocates. Largely because of conflict in the group over the appropriateness of an advocacy model of environmental education, the discussion had quickly turned to species survival instead. In this presentation he raised the issue again, working from a mimeographed handout entitled "Another Thought." The handout read as follows:

Perhaps greater stress at this meeting needs to be placed on who environmental educators are and the skills they need.

First, by definition, environmental educators are advocates--advocating certain social goals and values (in the context of social justice). Therefore, a major issue has to be accountability--to whom? This should always be foremost in one's mind.

Environmental educators, as activists, need some skills to effect change. Already there is great emphasis on technical and technological skills, such as data retrieval, research, and law. Often these are not humane. We need more emphasis on humane skills, as environmental issues are fundamentally people issues.

1. Interpersonal behavior skills. Issues of ego, trust, sharing, listening, self-righteousness. Issues of racism, sexism, and class-elitism.
2. Organizational development skills. Hierarchical relationships, responsibility, sharing. Effectiveness depends on the human environment of the working place.
3. Goal identification skills. Value identification and analysis consistent with overall goals. Identify basic goals to work toward--work in actions consistently in relationship to goals.
4. Knowing more about yourself. Strengths and weaknesses. In context of personality. Less alienation from one's own body and emotion. Jim Swan's message: "You must know more about who you are before laying down a change rap on others." Clarity about oneself as being value-centric.
5. The building in of social power-building skills requiring more of a human dimension--awareness, sensitivity, etc. Media skills, community organizing skills. Skills in power strategy shifting from rational-empirical to power-coercive to rational-empirical, etc.
6. Survival skills. Each has her or his own psychic needs--we need to identify them and make sure that one has personal strategies that either achieve or maintain them. Another way of saying this is the importance of identifying the personal tools needed to cope with a high-risk environment. This includes a human support system, and an economic support system (i.e., maintenance needs). Knowing how to deal with personal life-planning issues when immersed in a high-risk anti-humane and establishment environment. Self-defense skills, etc.

How to address the above issues? We need to identify training strategies for environmental educators. Certainly we need in-service training in these skill areas. A possible question for conference participants is how might this be done, or perhaps more basic--How important is all of this to you?

In explaining the handout, he expressed the view that environmental organizations are too often inhumane in their approach to issues. He gave as an example a current conflict between ranchers and Crow Indians in Montana. At stake is a strip of land to which the Crows own the mineral rights and the ranchers own the surface rights. A group of young Crows took over the tribe's minerals committee and decided to lease this strip for coal development, instead of leasing reservation land (with the resulting disruption of the Crow culture) or no land (with the resulting loss of desperately needed income). Friends of the Earth joined the ranchers in a suit to stop this development. Bill Bryan saw this decision as showing insensitivity to the Crows' need to stave off approaching cultural genocide. That too, he said, is an environmental issue--one that environmental groups tend to ignore. Should environmental groups be working for wealthy ranchers, he asked, or should they be helping the Crows instead?

The discussion of this presentation focused on four points: (1) Several participants working in schools pointed out that the constraints on their advocacy were much greater than those on people who work with adults; the need in schools is to advocate freedom of choice rather than a particular viewpoint. In response, it was noted that the concept of individual choice makes more sense when dealing with members of an elite group than it does when dealing with members of an oppressed group that has very little collective freedom of choice. (2) A

distinction was also drawn between advocacy "up" (trying to wrest power from an institution) and advocacy "down" (trying to instruct an unorganized group of individuals). Participants noted a universal tendency to advocate a viewpoint more often to those less powerful than to those more powerful. Traditional educators advocate down; activists advocate up, which requires different skills. (3) The need for advocates to "have their own values straight" before they try to influence others was questioned as possibly paralytic in its impact. We must try to deal with our internal problems, it was said, but we cannot wait until that is done before trying to deal with pressing external problems as well. Values clarification and skills building must accompany real-world involvement, not just precede it. (4) Some participants questioned the "self-righteousness" of environmental advocates who claim to have all the answers. In response, it was stressed that the "opposition" is equally self-righteous, and a great deal more powerful in imposing its views on others.

Proceedings, Check Points, and Staff Accountability

Pete Sandman made the presentation for the staff group. He pointed out that there were three possible audiences for the conference proceedings and check points. Proposal readers and the Office of Environmental Education ("advocacy up") constituted only one audience. People who are looking for help in planning their own environmental education programs

are another. A third audience is made up of "grant-getters and fence-sitters," people who might see the conference results as cues for change even if OEE does not explicitly adopt them. The results, he said, can be disseminated to these last two audiences by the conference staff and by participants, whether or not OEE decides to disseminate them.

The group's mimeographed handout also outlined the tentative format of the proceedings, and the process for preparing the proceedings and check points so as to assure staff accountability to the participants. The handout read as follows:

Audiences:

1. OEE, evaluators, etc.
2. People who want help doing environmental education
3. Grant-getters and fence-sitters

Proceedings:

1. Introduction
2. Process (pre-conference) and goals
3. Emerging issues
 - a. Papers
 - b. Interview transcripts
4. Check points
 - a. Products from Tuesday night groups
 - b. Discussion from Wednesday morning
 - c. Products and discussion from Wednesday afternoon and evening
5. Questionnaire results
6. Conference conclusions and evaluation
7. Glossary
8. List of participants
9. Comments of participants on proceedings
10. Check points (final instrument)
 - a. Criteria for evaluation and planning
 - b. Comments of participants on check points

Process and accountability:

1. Proceedings
 - a. Copies to participants
 - b. Comments included
 - c. Participants can disseminate (not just OEE) in whole or in part
2. Check points
 - a. Copies to participants
 - b. Comments included
 - c. If OEE changes or selects criteria, then theirs, not ours
 - d. If OEE wants to use the whole set of check points, then it must include the comments as well
 - e. Check points will be in multiple lists, with layers of detail, explicitness, and change orientation.

On the issue of accountability, the staff promised to send the completed proceedings and list of check points to all participants for separate formal letters of support or dissent. This would be in addition to informal suggestions for particular changes. Letters received in response to the proceedings would become a part of the proceedings; letters received in response to the check points would become a part of the check points. The staff said that it could not prevent OEE (or individual participants) from using the check points in modified form, but that it could and would insist that if the instrument were changed then it could not be identified as the conference instrument.

The discussion of this presentation was mild and supportive. The participants seemed much less concerned than they had been two days earlier about whether their work would be distorted or misused by the staff. It was suggested that the staff and participants keep each other informed after the

proceedings and check points were published, about whether and how OEE and others were using them.

Social Justice and Environmental Education

The social justice group was the last one scheduled to present its work to the other participants. Because people seemed very tired (and also because the group wanted to make some minor changes in its mimeographed handout), the group asked that its presentation be postponed until Thursday morning. The first hour of Thursday morning's session was set aside for this purpose.

The document handed out by the group early Thursday morning read as follows:

Preamble:

Ecology is the science and philosophy describing the inevitable interrelationship and interdependency of all life forms. This implies validity to all living systems which has not been maintained effectively, resulting in the current world-wide mess.

Current domestic and international imbalances that have been well documented among ecosystems--as well as racial, sexual and cultural groups--largely proceed from a mode of thought and organization that is white, western, technological, competitive, objective and male. This mode expresses itself in political and economic systems and in the allocation of human and other natural resources.

In order to look at procedures toward insuring that spaceship Earth will be able to support, in a healthy way, all of its various life systems, including human beings of diverse cultures, races and sexes, it is necessary always to take into account: 1) the social, political and economic context out of which environmental education operates, and

2) the social, political and economic consequences of a suggested program. Programs which do not take these factors into account are not consistent with ecological principles.

We suggest, therefore, that proposals for environmental education projects should address themselves to the following considerations, among others:

Item 1:

Identification and explanation of how people who have been excluded from environmental policy making--Third World peoples, ethnic and cultural minorities, women, children and economically disenfranchised--have a decision-making role in the program.

A. Assurance of such a role for those people most affected in any system of standard-setting, tradeoffs or any other policy considerations.

B. Indication of specific accountability procedures to constituencies affected by the program.

C. Analysis of gains and losses from the proposed program--who experiences them and in what ways.

Item 2:

Identification and explanation of how the program contributes to the equitable distribution of wealth and power. Include any relationship of this program to the development of alternative economic systems which will contribute to equal access to a healthy environment and retard exponential exploitative growth.

Item 3:

Identification of ways in which the program discourages the external exploitation of people or natural resources (e.g. the urban environment and its people by external sources or the exploitation of people or natural resources in a country by another country).

Item 4:

In international programs, evaluation of constraints that the political system of the host country will impose on the full implementation and effects of the environmental program.

The discussion of this document centered on the "preamble." Most of the participants (though not all) seemed to agree with what was being said, but many had reservations about the way it was said.

The word "objective" as part of the description of what is wrong with western environmental values was criticized by several participants. They agreed that many Americans are too technocratic and too data-oriented in their thinking style, not sufficiently open to the awesome and the mystic in nature and people. But the word "objective," they said, has a favorable connotation to most people, and may interfere with communicating this concept. Several alternatives were proposed; the group settled on "fact-fascinated."

A number of participants objected more fundamentally to the use of "white," "western" and "male" to describe environmentally unsound value systems. For some, this was a tactical point. The first paragraph, they said, opened doors that the second paragraph slammed shut again by identifying as the enemy people who must be won over as allies. For others, it was a substantive point. They questioned whether minorities, non-western cultures, or women would have done any better. For still others, it was a question of morality and humaneness. People shouldn't be labeled, they said; white males have as much right to be treated as individuals as minorities and women have.

In response, some participants stressed that enemies do exist and that the conference should be willing to "alienate" those enemies. Others argued that minorities, non-western cultures, and women would in fact have done better, and that this should be said. Still others indicated that the root of the problem is not the individual values of individual white western males, but rather the social system that gives too much power to people with those characteristics and those values. The group said it would consider revising the document so as to make this systemic focus more explicit. Most of the participants seemed highly satisfied with this resolution.

The group did in fact revise its work later in the morning, and handed out a final version at lunch. Although the group had intended to ask the other participants to endorse this version with their signatures, because of time pressures the request was never made. However, the verbal responses were very supportive, and of course nine participants (nearly half the conference roster) had joined in the writing. The final version read as follows:

Preamble:

Ecology is the science and philosophy describing the inevitable interrelationship and interdependency of all life forms. This implies validity to all living systems which has not been maintained effectively, resulting in the current world-wide mess.

Current domestic and international imbalances that have been well documented among ecosystems--as well as racial, sexual and cultural groups--largely proceed from a mode of thought and organization. This expresses itself in political and economic systems and in the allocation of human and other natural resources. It is generally characterized by a constellation of values which are: caucasian, western, technocratic, competitive, hierarchical, fact-fascinated, and male.

In order to look at procedures toward insuring that spaceship Earth will be able to support, in a healthy way, all of its various life systems, including human beings of diverse cultures, races, and sexes, it is necessary always to take into account the 1) social, political, and economic context out of which environmental education operates, and 2) social, political, and economic consequences of a suggested program. Programs which do not take these factors into account are not consistent with ecological principles.

We suggest, therefore, that proposals for environmental education projects should address themselves to the following considerations, among others.

Item 1:

Identification and explanation of how people who have been excluded from environmental policy making--Third World peoples, ethnic and cultural minorities, women, children, and economically and politically disenfranchised--have a decision-making role in the program.

A. Assurance of such a role for those people most affected in any system of standard-setting, tradeoffs, or any other policy considerations.

B. Indication of specific accountability procedures to constituencies affected by the program.

C. Analysis of gains and losses from the proposed program--who experiences them and in what ways.

Item 2:

Identification and explanation of how the program contributes to the equitable distribution of wealth and power. Include any relationship of this program to the development of alternative economic systems which will contribute to equal access to a healthy environment and retard exponential exploitative growth.

Item 3:

Indicate ways in which the program identifies and discourages the external exploitation of people or natural resources

(e.g. the urban environment and its people by external sources or the exploitation of people or natural resources in a country by another country).

Item 4:

In international programs evaluate the constraints that the political system of the host country will impose on the full implementation and effects of the environmental program. In domestic programs, similarly, evaluate the constraints of political structures, organization, and other results upon the implementation and the effects of the program.

After the early morning social justice presentation had ended, the staff (as promised) handed out the results of its attitude survey. Prior to the conference, some two hundred environmental educators had completed a questionnaire that asked them to respond to 45 "position statements" about the nine emerging issues; for each statement the respondents indicated their agreement or disagreement, and the extent to which they considered the issue important to their work as environmental educators. The conference participants had filled out the same questionnaire Monday evening. Both sets of results were now distributed for comparison.

The participants were divided into small groups to discuss the results. Two judgments seemed to dominate the discussions: (1) Where differences were found between the participants and the larger sample, the participants seemed to be somewhat more "radical" in their views on environmental issues and environmental education, while the larger sample seemed somewhat more traditional. (2) Overall, the participants

seemed surprised and pleased at the smallness of the difference in attitudes between themselves and the larger sample. Several participants explicitly withdrew their earlier characterizations of the field as incorrigibly conservative.

The results of the survey are analyzed in detail in Chapter Four.

The discussion of the questionnaire results lasted about half an hour. Participants were asked to spend the rest of the morning (about 90 minutes) in value-homogeneous groups, discussing strategies for achieving whatever goal the group had in common. The staff suggested that one group might want to discuss how to "maintain the traditional integrity of environmental education"; that a second might want to consider how to "move environmental education in the direction suggested by the emerging issues"; and that a third group might want to build strategies for "using environmental education to achieve social justice." Most of the participants either chose the second option or joined the group that was rewriting the social justice document. The staff did not attempt to document these strategy sessions.

Conference Evaluation

Thursday lunch was the final meeting of the conference. During and after the dessert, participants were asked to

evaluate the conference, both orally and on a written questionnaire.

The oral evaluation focused on four defects and three assets of the conference, as seen by the participants. Mentioned often as problems were: (1) the sterile physical environment of the conference; (2) the failure to provide enough time for informal conversations among participants; (3) the over-structured, high-pressure, sometimes inhumane conference schedule; and (4) a tendency toward didactic rhetoric and polarization. Listed often as merits were: (1) the diversity of the participants (though Native Americans and students were named as groups that should have been represented and weren't); (2) the importance and uniqueness of the issues discussed; and (3) the flexibility of the staff in adjusting schedules to meet emerging needs of the participants. These points were also reflected in the written evaluations, along with many additional ones.

The written evaluation form consisted of 32 five-point scales for participants to use in judging various aspects of the conference, followed by six open-ended questions. Sixteen participants completed the evaluation. The questions and responses are reproduced and discussed below. For the 32 quantitative items, the number inside each box represents the number of participants giving that particular answer; the means are indicated to the right of the item. All means were calculated by considering the far lefthand box as a "1,"

the box to the right of that as a "2," etc.; the far right-hand box thus equals "5."

The first three questions evaluated the conference as a whole:

1. Do you feel this conference as a whole clarified emerging issues in environmental education?

definitely

2	7	2	3	2
---	---	---	---	---

 not really Mean = 2.75

2. How much opportunity do you feel you had to share your knowledge and ideas with others during the conference?

little opportunity

0	4	2	5	4
---	---	---	---	---

 ample opportunity Mean = 3.60

3. How much opportunity do you feel you had to tap others' knowledge and hear their ideas?

little opportunity

1	6	2	4	3
---	---	---	---	---

 ample opportunity Mean = 3.12

Although the modal participant judged that the conference did help clarify the emerging issues, a number of participants reported that for them the issues were not really clarified. Most felt they had ample opportunity to share their own knowledge and ideas at the conference, but they were considerably less satisfied about their opportunity to hear the knowledge and ideas of others.

The fourth question asked the participants to evaluate the major events at the conference, from the pre-conference orientation to the Thursday morning session on social justice:

4. How would you rate the following activities?

Preconference orientation with respect to goals and objectives

helpful

5	4	4	1	2
---	---	---	---	---

 not helpful Mean = 2.44

Tuesday a.m. interviews

helpful

3	8	5	0	0
---	---	---	---	---

 not helpful Mean = 2.12

Tuesday p.m. interviews

helpful

2	8	3	2	1
---	---	---	---	---

 not helpful Mean = 2.50

Tuesday night generation of evaluative criteria

helpful

6	3	2	3	2
---	---	---	---	---

 not helpful Mean = 2.50

Wednesday a.m. sharing out of criteria

helpful

3	5	6	2	0
---	---	---	---	---

 not helpful Mean = 2.44

Wednesday p.m. work in self-selected groups on issues of your own choosing

helpful

6	4	4	0	0
---	---	---	---	---

 not helpful Mean = 1.86

Wednesday night discussion of the work of the self-selected groups

helpful

7	4	3	0	0
---	---	---	---	---

 not helpful Mean = 1.71

Thursday a.m. discussion of the social justice group's work

helpful

5	7	2	0	0
---	---	---	---	---

 not helpful Mean = 1.79

Thursday a.m. feedback on questionnaire results

helpful

2	7	4	0	1
---	---	---	---	---

 not helpful Mean = 2.36

The most helpful events, according to the participants, were the Wednesday night sharing of the work of self-selected groups, the continuation of that sharing for the social justice group Thursday morning, and the Wednesday afternoon self-selected group work itself. The participants were somewhat less enthusiastic about the tasks designed by the staff, although every event listed was judged more helpful than not.

Question five provided twelve scales for the participants to rate the mood and personal impact of the conference:

5. I would say this conference has been:

enjoyable	<table border="1"><tr><td>4</td><td>5</td><td>4</td><td>2</td><td>0</td></tr></table>	4	5	4	2	0	not enjoyable	Mean = 2.27
4	5	4	2	0				
boring	<table border="1"><tr><td>0</td><td>2</td><td>3</td><td>4</td><td>7</td></tr></table>	0	2	3	4	7	stimulating	Mean = 4.00
0	2	3	4	7				
paced too fast	<table border="1"><tr><td>2</td><td>5</td><td>6</td><td>2</td><td>1</td></tr></table>	2	5	6	2	1	paced too slow	Mean = 2.69
2	5	6	2	1				
too broad in scope	<table border="1"><tr><td>0</td><td>3</td><td>8</td><td>0</td><td>1</td></tr></table>	0	3	8	0	1	too narrow in scope	Mean = 2.92
0	3	8	0	1				
involving	<table border="1"><tr><td>5</td><td>6</td><td>1</td><td>4</td><td>0</td></tr></table>	5	6	1	4	0	not involving	Mean = 2.25
5	6	1	4	0				
confusing	<table border="1"><tr><td>1</td><td>1</td><td>7</td><td>4</td><td>3</td></tr></table>	1	1	7	4	3	clarifying	Mean = 3.44
1	1	7	4	3				
discouraging	<table border="1"><tr><td>0</td><td>6</td><td>2</td><td>4</td><td>4</td></tr></table>	0	6	2	4	4	encouraging	Mean = 3.38
0	6	2	4	4				

helpful	7	6	3	0	0	not helpful	Mean = 1.75
tension-producing	4	7	3	2	0	relaxing	Mean = 2.19
productive	3	6	4	3	0	not productive	Mean = 2.44
frustrating	7	2	6	1	0	freeing	Mean = 2.06
worthwhile	7	8	1	0	0	waste of time	Mean = 1.62

In order of extremeness, the participants considered the conference very worthwhile, very helpful, and very stimulating. They found it more frustrating than freeing, more tension-producing than relaxing, more involving than not involving, more enjoyable than not enjoyable, and more productive than not productive. The participants saw the conference as only slightly more clarifying than confusing, and only slightly more encouraging than discouraging. It was paced neither too fast nor too slow, and was neither too broad nor too narrow in scope.

The sixth question asked the participants to rate the value of eight of the nine pre-conference papers (the paper on skills was erroneously left off the questionnaire):

6. Which pre-conference documents did you find particularly useful? Please rank. (1=high value and 5=low value)

The relationship between environmental issues and issues of social justice.

1	2	3	4	5	Did not read
8	5	2	0	0	1 Mean = 1.60

The constituency of environmentalism

1	2	3	4	5	Did not read	
1	5	5	4	0	1	Mean = 2.80

The relationship between environmental issues and economics

1	2	3	4	5	Did not read	
2	2	4	6	2	0	Mean = 3.25

The autonomy and integrity of the learner in environmental education

1	2	3	4	5	Did not read	
5	8	2	1	0	0	Mean = 1.94

The relationship between environmental education in schools and the structure and process of formal education

1	2	3	4	5	Did not read	
4	4	4	2	1	1	Mean = 2.47

Local versus global perspectives in environmental education

1	2	3	4	5	Did not read	
3	8	3	0	0	2	Mean = 2.00

Environmental education and the concept of values

1	2	3	4	5	Did not read	
4	5	4	2	0	1	Mean = 2.27

The support system for environmental education

1	2	3	4	5	Did not read	
3	5	3	2	2	1	Mean = 2.67

Of the eight papers, only the one on economics was rated below the midpoint on the scale. The participants found the papers on social justice and learner autonomy most valuable, followed by local versus global perspectives, values, formal education, support systems, and constituency. It is worth noting that nearly all the participants said they had read all or nearly all the papers.

Questions seven through eleven asked for open-ended evaluations of various aspects of the conference. The answers were so diverse that trying to summarize them would be futile. The questions and responses are listed below.

7. What can you tell us about the pre-conference documents in general?

Jargon contained therein delayed common understanding of statement of issues and the process of clarification and consensus.

The origin of concepts and the positions developed were not always clearly identified nor sufficiently developed to allow for reflection and analysis. They did serve the purpose of initiating reactions.

In general it was a good job with much helpful research.

Great as points for argumentation; we should have spent far more time on these materials.

They were informative as far as setting up a base for conferees before the conference, but very little referral was made to them during the course of the conference.

Necessary.

I expected the documents to be the outline of the conference--I felt they turned out to be reference points.

Generally good articulation of certain issues.

They were excellently prepared, were in-depth in scope, but needed intensive reading and rereading.

For one they did cause me to think about the issues. I would have liked to have had a clearer idea that we were going to draw from them criteria for assessing environmental education programs.

These documents were very informative to me as an outsider--not sensitive to the issues. They were full of issues that, although I agree with, had not been critically formalized in my own mind.

On the whole I thought the documents were superficial, ill-formed, and naive. In many places I don't believe they had been pursued in any great depth. I indicated that most were relatively useful to me by which I meant that it is useful to know how differently people "see" (or don't see) things.

They were very helpful in terms of supplying information and bringing other points of view that may not have occurred to the reader. In some instances I found them a little vague or ambiguous but that is not necessarily bad for that required that the reader dig.

Good for beginning the discussion. Great departure from traditional environmental education position papers. Too academic.

The questionnaire requesting agreement-disagreement and relative importance was not good. Too many statements contained several parts or words which qualified the statements. Therefore, the responses were in my opinion not solid. Instructions and simpler statements would have increased the probability that the reader understood.

8. If we had to do it all over again what would you have us do differently?

I would have allowed more time and place for informal interaction between participants.

Nothing!

Yes, I would have liked more time for total group response as I learned a lot from the different points of view.

A better opportunity to establish relationships with all conferees at the beginning of the conference.

Stick with the rules imposed, e.g. full participation--no late arrivals, no early departures; time limits imposed and enforced; watch for a duel with non-verbal behavioral reactions.

Include alternative consciousness and perceptions of "environment"--particularly Indians, children and living plants and trees. Never, never, never again exclude the actual environment by putting us in a "motel"--artificial air, light, muzak. Environmental education is not only objective. We function on a thousand levels and if environmental education is confined to facts and strategy, we lose.

Spend Monday night getting to know the other participants--have more open-ended sessions.

Encourage more openness and follow interpersonal, humanistic group process dynamics more closely.

The sessions should be given more time; this means that the conference should have been extended a day or so.

I would have liked to have dealt far more thoroughly with the document and its revision. I would also want more time within the existing format, perhaps five days--two intensive days, then R & R, and then two more intensive days.

In the group interactions, conversations were dominated by a small number of people and many points and subtleties of views were lost.

In the opening evening session, questions for introductory conversations tended to separate instead of unite. Better questions would have been along the order of perception of being included in the conference.

Not have it at Webers. Trust building and interpersonal exercises at the beginning of the meeting. More staff integration into the conference.

Bring in students who are now experiencing environmental education as participants. Provide a greater variety of tasks, group mix, and instructional processes other than talking--e.g. role-playing, skills learning, position papers, etc.

9. What things helped you take part in the conference?

Acceptance of schedule changing to respond to wishes of participants.

Interest in topics and self-initiative.

My own desire to examine the positions of others.

Concern for the issues and small group opportunities.

The background I have in education, and the opportunity I had to help develop an environmental education program.

My own initiative; support from others.

Having my own thoughts and values organized and knowing where to use my skills.

Open spaces, personal interaction, introduction of subjective realities. Also changes in form--more personal statements by people, more feeling, role-playing, etc. Also, finally appreciated eventual staff flexibility in changing format and providing open spaces.

Sheer persistence and freedom of choice in grouping.

The staff's flexibility in changing the conference program to better meet group and conference emerging needs.

That people were willing to listen to what I had to say and consider it in the formal issue paper.

An ambiance of openness (tolerance toward different approaches, viewpoints, etc.).

The preplanning by the staff. The openness of the participants. My own desire to grow as a result of the conference. My desire to make a contribution.

Polarization. Small task-oriented group settings. Wednesday afternoon and evening structure.

OEE encouraged me to attend. The position paper was instructive. Certain individuals were very supportive to working at the conference objectives; others had their own agendas to deliver and that blocked participation by more than a few.

10. What things hindered you from taking part in the conference?

Nothing--for I did take part. However in some instances I may not have expressed myself as much as some others due to being less aggressive than some.

Dogmatic, immovable posture of some participants. Having a stance that inherently excludes any new input, any mutability, does not leave any room for dialogue. Confrontation is useful in clarifying positions, expressing points of contact and conflict, but not if any contending faction at the outset states that their position is firm and unchangeable.

At times lack of an understanding of the technical terms.

The conference location hindered the building of relationships to an extent.

No attempt to control soap-boxing and ego trips.

The objectified form of the conference itself and the definitions of "environmental education" in terribly narrow terms.

Living at home and using my car as home base.

Factionalizing without any attempt to confront that phenomenon and the feelings behind it.

None.

Intolerance of those with a doctrinaire position on social justice and eco-issues. Dialogue only to confirm by supportive statements the position held--i.e., power-coercion model; "radical" over "liberal" change strategies.

Time constraints, a sense of responsibility not to dominate conference time in the full presentation for examination of my position. Quick, intuitive feelings and sloppy language forced value choices without a sound reasoning process.

Frustration of blocks to interactions.

Willingness of people who supposedly held strong positions to withhold them from the group. Constant background of mechanical noises throughout the conference session. Motel setting in general.

Dominant personalities. Verbiage. Webers.

Not being assigned partial responsibility for undertaking some of the tasks. I didn't feel used or useful, and I wanted to feel that my experiences could be helpful to others.

11. Please describe conference goals and objectives and how they were accomplished or not accomplished.

Goals and objectives included development of a tool for OEE evaluation of programs, sharing of views by a diverse group of people and insurance these views will be included in materials going to OEE.

The goal of examining some emerging issues was accomplished; the goal of setting check points by the conferees was inconsistent with the first goal and was not accomplished by the conferees although the staff will prepare something.

I feel that the conference goals and objectives were accomplished in that enough information is now available to produce a set of criteria to present to OEE as possible criteria for evaluating proposals. More time would have produced a more unified document.

Products--for the field and OEE--were accomplished principally by channeling information exchange among professionals (personal initiatives plus conference structures). The goal of interaction among people was not really helped by the conference but by group dynamics.

We have identified emerging issues and developed future directions. I have solidified my feelings, brought myself up to date, and interacted with a fine group of people. I will use much of what I have learned.

I never understood the conference goals.

Identification and prioritization of emerging issues--we discussed those previously identified but not much more

beyond that point. Development of OEE guidelines--accomplished through brainstorming techniques.

To clarify emerging issues related to the concept of environmental education and the roles of people involved in the issues and environmental education. (For me, this was accomplished well.) To develop criteria from the issues for discussing environmental education programs. (Perhaps accomplished to the extent it could have been.)

To consider the emerging issues and develop practical instrumentation for judging proposals that address themselves to the issues and their methodology for carrying them out. To some extent this was accomplished.

To radicalize the field of environmental education!--and I think that that occurred, at least in the minds of the participants (at least mine).

The objective of bringing together people of diverse backgrounds to examine issues from different perspectives and to recommend criteria to OEE were both valid and worthwhile objectives. I feel that they were both accomplished.

To produce suggested revisions to OEE proposal guidelines. To generate written support for personal and political positions, somewhat disguised.

The final question in the evaluation asked: "Do you feel this conference has any long-range implications for what you are doing in the field of environmental education? In what way, or why not?" All the participants who answered the question checked "yes." Their explanations are recorded below:

I am particularly concerned with values and what and how to incorporate them into the curriculum for our students. The conference has been particularly helpful in defining issues and getting more insight into values.

I feel good about the issues exposed and the stand taken. I'm not comfortable with the process.

I will take this information back to my center and try to promote the regard for the prevention of human wastage.

It will cause me to reexamine the goals, objectives and approaches of environmental education.

I have learned where "the field" is at and realize that "the field" itself, and the way it defines itself, is part of the problem.

If a useful document is produced it will provide a tool for the classroom for me, and it should provide new directions for the Movement.

Yes.

I have gained a lot of information from people here at the conference, which has given me more inspiration to work with environmental programs. I have also gained knowledge in the area of possibilities for environmental programs, and I have gained first-hand knowledge of what is expected in an environmental education proposal.

Enjoyed meeting and learning from others in environmental education ("Instruction").

I will bring a broadened perspective of certain issues to the job along with a reinforcement of other ideas.

Raises issues which need to be dealt with in environmental education.

I better understand the frustrations and problems of environmental educators. I have knowledge of the priority felt by a particular group of educators and reaction to it by individuals outside environmental education.

It has helped clarify my thinking concerning my own direction within environmental advocacy. It has helped to fortify my views--e.g., given me support for what I'm thinking and doing.

I would like to include some of the participants in developing environmental education training programs, brainstorming sessions, workshops, and summer preservice and inservice courses and materials.

At the conclusion of the evaluation, the participants and staff were free to go. Most did so, quickly; a few stayed for a

swim. The work of the conference was over. The work of compiling, recording, and disseminating the conference results was ready to start. And the work of environmental education, it was clear to all, had only just begun.

CHAPTER FOUR

The Results of the Survey

The survey reported and analyzed in this chapter was undertaken in order to understand the attitudes of practicing environmental educators toward the nine emerging issues that were focused on at the 1974 University of Michigan National Conference on Emerging Issues in Environmental Education. The conference planners felt that such empirical information on such issues would be useful in:

1. Developing the conference working papers.
2. Focusing conference discussions.
3. Providing a means of comparing the attitudes of conference participants with those that characterize the field of environmental education.
4. Providing a data base for environmental educators concerning the attitudes that presently characterize the field.

This chapter is intended to fulfill the third and fourth of these goals.

The chapter is divided into three sections, as follows:

- (1) The development of the questionnaire, the characteristics of the sample, and the approach used for analysis and interpretation.
- (2) The results of the survey, analyzed and

discussed separately for each of the nine emerging issues.

(3) A comparison of the survey results with the attitudes expressed on the same questionnaire by the twenty conference participants.

Procedures, Sample, and Analytic Method

In July of 1973, shortly after funding was granted to plan and run a national conference on environmental education, the conference staff mailed an open-ended questionnaire to working environmental educators. This preliminary questionnaire asked for suggestions on: (1) current issues to be resolved in environmental education; (2) emerging issues to be introduced; (3) little-known readings to be shared; and (4) exciting people--especially from outside the field--to be considered as possible participants. The questionnaire was sent to more than 300 environmental educators around the country, identified by the staff largely on the basis of William Stapp's personal mailing list. Completed questionnaires were returned by about 150 individuals. At the same time, the staff made its own assessment of the current debates and emerging issues in the field.

The debates and issues reported in the completed questionnaires, as well as those surfaced by the staff, led to the conclusion that the emerging issues incorporated most of the current debates, though from new perspectives.

The staff therefore decided to focus the conference, and the pre-conference research, on emerging issues in environmental education.

Using the questionnaire results as well as its own thinking, the staff developed a list of nine emerging issues, with one page of analysis and description for each issue. Nine research assistants were employed to begin preparing pre-conference position papers on the issues, based largely on the readings suggested in the questionnaires. At the same time, a second, more focused questionnaire was prepared, in consultation with the research assistants.

This second questionnaire consisted of 45 value statements about environmental education, five statements for each of the nine emerging issues. The statements were selected to reflect a wide range of perspectives regarding the issues. For each statement, respondents were asked to express their agreement or disagreement on a five-point scale, ranging from "certainly agree" to "certainly disagree." In addition, respondents were asked to judge the importance to environmental education of the issues raised by each statement, on a five-point scale ranging from "very important" to "very unimportant." A respondent's view of the professional relevance of each statement was thus measured independently of his or her opinion about the statement itself. Finally, the questionnaire included questions about age,

sex, years in environmental education, and principal area of practice within environmental education.

The questionnaire, as mailed to the respondents, is reproduced on the following pages.

EMERGING ISSUES IN ENVIRONMENTAL EDUCATION

Listed on the following pages are 45 statements of possible relevance to environmental education today and in the future. These statements have been written to reflect a wide range of viewpoints on issues that are being considered as possible topics for a national conference on "Emerging Issues in Environmental Education."

In order to make the conference as useful as possible to participants and to the field as a whole, we are trying to determine how people who are actively involved in environmental education feel about the 45 statements. The results of this survey will guide the final choice of issues for the conference, and will be published in the conference report.

We hope you will agree that the survey should prove valuable and that this questionnaire is worth filling out.

You are asked to respond to two attitude scales for each statement. The first scale concerns agreement or disagreement with the statement, ranging from 1 (certainly agree) to 5 (certainly disagree). The second scale asks how much importance for environmental education you see in the statement and the issues it raises for you, ranging again from 1 (very important) to 5 (very unimportant).

For example, if you felt a particular statement was certainly true but not at all important to you as an environmental educator, you might circle "1" for the first scale and "5" for the second. If another statement struck you as extremely important to environmental education though you were undecided as to its truth, you might circle "3" for the agreement scale and then "1" for the importance scale. If you felt a statement was totally in error but raised issues of moderate importance to environmental education, you might circle "5" and then "3".

Please circle only one number for each scale.

1. Environmental quality and social justice are essentially independent goals, both very important but without much connection between them.

Certainly agree 1 2 3 4 5 Certainly disagree [111]

Very important 1 2 3 4 5 Very unimportant [112]

2. One of the most important goals of environmental education is to try to reverse the environmental backlash and combat the public's dwindling commitment to environmental quality.

Certainly agree 1 2 3 4 5 Certainly disagree [211]

Very important 1 2 3 4 5 Very unimportant [212]

3. There is no essential contradiction between the goals of environmentalism and the American economic system; radical economic change is not required to achieve environmental quality.

Certainly agree 1 2 3 4 5 Certainly disagree [311]

Very important 1 2 3 4 5 Very unimportant [312]

4. A vital job for environmental education is to get people to understand the environment and how it works; environmental commitment and sensitivity will generally follow from environmental understanding.

Certainly agree 1 2 3 4 5 Certainly disagree [411]

Very important 1 2 3 4 5 Very unimportant [412]

5. Largely because of successful pre-service and in-service teacher education programs, most environmental educators already have a repertoire of relevant teaching skills sufficient for their needs; further skills training for environmental educators themselves is not a high priority.

Certainly agree 1 2 3 4 5 Certainly disagree [511]

Very important 1 2 3 4 5 Very unimportant [512]

6. It is important for environmental educators to devote much more time to working with factory workers, community officials, the elderly, and other adult audiences, perhaps through the mass media.

Certainly agree 1 2 3 4 5 Certainly disagree [611]

Very important 1 2 3 4 5 Very unimportant [612]

7. Since ecological principles are universal, and since international politics is complex and value-laden, it is wise to let the global context of environmental education emerge from the principles of ecology rather than from the details of international resource policy.

Certainly agree 1 2 3 4 5 Certainly disagree [711]

Very important 1 2 3 4 5 Very unimportant [712]

8. Environmental educators inevitably share some of the profoundly anti-environmental values of our society, making it enormously difficult to do the job that environmental education must do.

Certainly agree 1 2 3 4 5 Certainly disagree [811]

Very important 1 2 3 4 5 Very unimportant [812]

9. It is important for environmental education to be a diverse movement dominated by independent local efforts; it is dangerous to rely on national programs, standards, models, or support systems that could lead to centralization and standardization.

Certainly agree 1 2 3 4 5 Certainly disagree [911]

Very important 1 2 3 4 5 Very unimportant [912]

10. Too many environmentalists concentrate too much on issues such as wilderness preservation, instead of the more pressing environmental burdens on inner-city residents, poor people, etc.

Certainly agree 1 2 3 4 5 Certainly disagree [121]

Very important 1 2 3 4 5 Very unimportant [122]

11. The environmental movement should build far more alliances with traditionally powerful groups in our society, such as government, industry, and educational institutions.

Certainly agree 1 2 3 4 5 Certainly disagree [221]

Very important 1 2 3 4 5 Very unimportant [222]

12. Environmental quality probably cannot be achieved until developed countries like the United States give up or lose their disproportionate control over the economic benefits of the world's resources.

Certainly agree 1 2 3 4 5 Certainly disagree [321]

Very important 1 2 3 4 5 Very unimportant [322]

13. A goal of education--including environmental education--is to influence the student to become different in some particular way from what he or she was before.

Certainly agree 1 2 3 4 5 Certainly disagree [421]

Very important 1 2 3 4 5 Very unimportant [422]

14. Environmental educators should generally avoid teaching the sorts of skills that may attract learners to counter-cultural or "alternative" lifestyles or lead them to disparage the values of their own culture.

Certainly agree 1 2 3 4 5 Certainly disagree [521]

Very important 1 2 3 4 5 Very unimportant [522]

15. Environmental education cannot be fully accepted by school systems until national standards and models are developed and implemented--for teacher training, curricula, instructional tools, evaluation instruments, etc.

Certainly agree 1 2 3 4 5 Certainly disagree [621]

Very important 1 2 3 4 5 Very unimportant [622]

16. It is important for environmental education to look carefully at the political, economic, social, and environmental value system of this country, and to analyze the impact of these cultural assumptions on environmental quality locally, nationally, and internationally.

Certainly agree 1 2 3 4 5 Certainly disagree [721]

Very important 1 2 3 4 5 Very unimportant [722]

17. Environmentalism endures through its close link with traditional religious and cultural values; efforts to depict environmentalism as revolutionary are inaccurate and misguided.

Certainly agree 1 2 3 4 5 Certainly disagree [821]

Very important 1 2 3 4 5 Very unimportant [822]

18. Students should have substantial real control over the design and implementation of environmental education programs.

Certainly agree 1 2 3 4 5 Certainly disagree [921]

Very important 1 2 3 4 5 Very unimportant [922]

19. It is vital for environmental educators to learn how to motivate broad environmental awareness in minority and inner-city youth, who tend to be too little concerned about environmental quality.

Certainly agree 1 2 3 4 5 Certainly disagree [131]

Very important 1 2 3 4 5 Very unimportant [132]

20. Concern for endangered species is properly a high-priority issue for the environmental movement; the true environmentalist acts on behalf of all living things, not just people.

Certainly agree 1 2 3 4 5 Certainly disagree [231]

Very important 1 2 3 4 5 Very unimportant [232]

21. People just will not accept an "environmentalism" that demands a significant change in their economic standard of living or patterns of consumption, and it is self-defeating for the environmental movement or environmental education to promote these sorts of changes.

Certainly agree 1 2 3 4 5 Certainly disagree [331]

Very important 1 2 3 4 5 Very unimportant [332]

22. There is relatively little point in working to clarify the environmental values of a student unless those values, once clarified, are likely to be environmentally sound.

Certainly agree 1 2 3 4 5 Certainly disagree [431]

Very important 1 2 3 4 5 Very unimportant [432]

23. It is appropriate for environmental educators and their students to become deeply involved in community environmental controversies, and to identify, publicize, and attempt to help solve local environmental problems that are not being dealt with.

Certainly agree 1 2 3 4 5 Certainly disagree [531]

Very important 1 2 3 4 5 Very unimportant [532]

24. It is important for environmental educators to avoid approaches that are likely to threaten or challenge the school system, and concentrate on building and maintaining the acceptability of environmental education in the minds of those in authority.

Certainly agree 1 2 3 4 5 Certainly disagree [631]

Very important 1 2 3 4 5 Very unimportant [632]

25. Many environmental educators have inevitably been socialized and trained within an atmosphere of American provincialism that makes it very difficult to consider the earth as interrelated in a decisive way.

Certainly agree 1 2 3 4 5 Certainly disagree [731]

Very important 1 2 3 4 5 Very unimportant [732]

26. The environmental ethic deals essentially with attitudes toward the biophysical environment, and is neither founded on nor inconsistent with the fundamental social values of our society.

Certainly agree 1 2 3 4 5 Certainly disagree [831]

Very important 1 2 3 4 5 Very unimportant [832]

27. Although parents have a legitimate interest in their children's education, parental opposition to environmental education innovations should not be permitted to scuttle programs that professional environmental educators consider valuable.

Certainly agree 1 2 3 4 5 Certainly disagree [931]

Very important 1 2 3 4 5 Very unimportant [932]

28. Environmental education should deal with policy questions mostly in terms of general public needs, not the specialized needs or wants of particular cultural, ethnic, or other groups of citizens.

Certainly agree 1 2 3 4 5 Certainly disagree [141]

Very important 1 2 3 4 5 Very unimportant [142]

29. A fundamental ethical problem confronting the environmental movement is that the movement tends to consider itself accountable to no one but itself, and has failed to respond adequately to the needs and wants of people outside the movement.

Certainly agree 1 2 3 4 5 Certainly disagree [241]

Very important 1 2 3 4 5 Very unimportant [242]

30. It is almost pointless for environmental education to consider the complex economic repercussions of environmental policies until we have first succeeded in arousing concern for environmental quality in students.

Certainly agree 1 2 3 4 5 Certainly disagree [341]

Very important 1 2 3 4 5 Very unimportant [342]

31. Students, like everyone, have a right to reject environmentalism, and environmental educators have an obligation to protect that right by avoiding propaganda, "behavior modification," or other manipulative approaches.

Certainly agree 1 2 3 4 5 Certainly disagree [441]

Very important 1 2 3 4 5 Very unimportant [442]

32. Environmental educators should devote more effort to helping learners acquire relevant environmental skills, so that students will be able to take effective action to deal with environmental problems.

Certainly agree 1 2 3 4 5 Certainly disagree [541]

Very important 1 2 3 4 5 Very unimportant [542]

33. The most practical and satisfactory way to teach environmental education in the schools is as a separate discipline or specialty, perhaps within the sciences or social studies.

Certainly agree 1 2 3 4 5 Certainly disagree [641]

Very important 1 2 3 4 5 Very unimportant [642]

34. New organizations and new curriculum materials should be created that encourage both local and international approaches to the environment, instead of the current overemphasis on national problems in environmental education.

Certainly agree 1 2 3 4 5 Certainly disagree [741]

Very important 1 2 3 4 5 Very unimportant [742]

35. The values that environmental education can and should transmit are consistent with the values in the educational process as a whole, and thus need little special attention in designing environmental curricula.

Certainly agree 1 2 3 4 5 Certainly disagree [841]

Very important 1 2 3 4 5 Very unimportant [842]

36. It is vital for environmental educators to encourage increased funding by designing environmental education programs that will be attractive to government agencies, industry, and other potential sources of funds.

Certainly agree 1 2 3 4 5 Certainly disagree [941]

Very important 1 2 3 4 5 Very unimportant [942]

37. Environmental educators should be involved in pursuing social justice and exploring the social implications of potential environmental policies--certainly in the classroom and probably in the political arena as well.

Certainly agree 1 2 3 4 5 Certainly disagree [151]

Very important 1 2 3 4 5 Very unimportant [152]

38. The survival of humanity as a species is the ultimate goal of environmentalism, and must take precedence over the special needs or concerns of particular groups.

Certainly agree 1 2 3 4 5 Certainly disagree [251]

Very important 1 2 3 4 5 Very unimportant [252]

39. At least in the short run, environmental improvement will be to the economic disadvantage of many Americans, and environmentalists must devise ways of lessening the hardship, especially on the poor who are most vulnerable and least responsible for environmental degradation.

Certainly agree 1 2 3 4 5 Certainly disagree [351]

Very important 1 2 3 4 5 Very unimportant [352]

40. The advantage of "non-directive" teaching styles over more traditional styles is that they are better able to change the fundamental values of the learner; this makes them extremely valuable to environmental education, but only if the teacher can control the nature of the change.

Certainly agree 1 2 3 4 5 Certainly disagree [451]

Very important 1 2 3 4 5 Very unimportant [452]

41. Existing environmental education curricula are well designed to encourage students in becoming knowledgeable, skilled citizens active in community environmental issues.

Certainly agree 1 2 3 4 5 Certainly disagree [551]

Very important 1 2 3 4 5 Very unimportant [552]

42. In many ways environmental education is so different from most school subjects that it will be impossible to do the job effectively without challenging and changing the structure and process of the typical American school system.

Certainly agree 1 2 3 4 5 Certainly disagree [651]

Very important 1 2 3 4 5 Very unimportant [652]

43. Environmental education often puts too much stress on local issues instead of concentrating on more important regional and national phenomena.

Certainly agree 1 2 3 4 5 Certainly disagree [751]

Very important 1 2 3 4 5 Very unimportant [752]

44. A high priority for environmental education should be to devise better ways to undermine established anti-environmental values and inculcate new environmentally sound ones.

Certainly agree 1 2 3 4 5 Certainly disagree [851]

Very important 1 2 3 4 5 Very unimportant [852]

45. Community members of all sorts, from industry leaders to local environmental activists, should participate in the design and implementation of environmental education curricula.

Certainly agree 1 2 3 4 5 Certainly disagree [951]

Very important 1 2 3 4 5 Very unimportant [952]

Please check the items that apply to you:

Age:

☐ Under 25	Principal field (check only one):
☐ 25-34	☐ Primary education
☐ 35-44	☐ Secondary education
☐ 45-54	☐ College or university education
☐ 55 or more	☐ Curriculum planning
	☐ Educational administration
	☐ Other: _____

Sex:

☐ Male
☐ Female

Years in environmental education:

- () Less than 2 years
- () 2-5 years
- () 6-10 years
- () 11-20 years
- () More than 20 years
- () I am not in environmental education

Thank you for your help. We would welcome any additional comments on the questionnaire or the issues it raises. Please check the box on the cover page if you want a copy of the survey results.

The questionnaire was mailed to all individuals who had responded to the first questionnaire, and to all individuals who had received a grant from the Office of Environmental Education in 1972 or 1973. About 350 questionnaires were mailed out. The analysis presented here is based on the 199 completed questionnaires that were returned by early June, 1974.

Table 1 presents information on the age and sex of the respondents; the majority were over 30, and most were males. Table 2 presents information on the respondents' length of experience in environmental education, and their specialized field within environmental education. The vast majority had at least two years experience in the field; a high proportion were involved principally in curriculum planning, administration, or college teaching.

The analysis of this group's attitudes toward the 45 value statements will be based on four statistics for each statement:

1. The mean response to the "agreement" scale, indicating to what extent the group agreed or disagreed with the statement.
2. The standard deviation of responses to the "agreement" scale, indicating to what extent the group experienced consensus or dissensus in their opinions on the statement.
3. The mean response to the "importance" scale, indicating to what extent the group considered

TABLE 1
AGE AND SEX

<u>Age Distribution of Respondents</u>	
<u>Age</u>	<u>Percent of Sample Within Age Range</u>
Under 25	4.5
25-34	22.4
35-44	36.3
45-54	21.9
55 or more	14.4
No Answer	.5

<u>Sex Distribution of Respondents</u>	
<u>Sex</u>	<u>Percent of Sample</u>
Male	78.1
Female	14.9
No Answer	7.0

TABLE 2
EXPERIENCE AND SPECIALTY

Years in Environmental Education

<u>Years of Experience</u>	<u>Percent of Sample in Given Category</u>
Less than 2	6.5
2-5	35.3
6-10	21.4
11-20	16.4
More than 20	12.9
Not in Environmental Education	5.5
No answer	2.0

Specialized Fields

<u>Principal Field</u>	<u>Percent of Sample in Given Category</u>
Primary education	1.0
Secondary education	6.0
College or university education	30.8
Curriculum planning	11.9
Educational adminis- tration	15.4
Other	33.8
No answer	1.0

the statement (and the issues it raised) professionally important or unimportant.

4. The standard deviation of responses to the "importance" scale, indicating to what extent the group experienced consensus or dissensus in their views of the statement's professional importance.

To help focus attention on those statements that yielded the most interesting results, the range across all 45 statements for each of the four statistics was divided into quartiles. In other words, for each of the four statistics, the eleven or twelve statements that produced the most extreme responses in each direction were identified. Most of the discussion that follows will be based on these extreme responses; the "middle half" are noted in the tables but seldom discussed.

The following conventions, then, will be followed throughout this chapter (note that low numbers represent agreement rather than disagreement, and importance rather than unimportance):

1. Mean on "agreement": The eleven statements with means of 2.19 or less are referred to as those with which the respondents agreed. The eleven statements with means of 3.53 or more are referred to as those with which the respondents disagreed. The 23 statements with

means between 2.19 and 3.53 are not discussed.

2. Deviation on "agreement": The eleven statements with standard deviations of 1.12 or less are referred to as those on which the respondents experienced consensus (with respect to agreement). The eleven statements with standard deviations of 1.36 or more are referred to as those on which the respondents experienced dissensus. The 23 statements with standard deviations between 1.12 and 1.36 are not discussed.
3. Mean on "importance": The twelve statements with means of 1.83 or less are referred to as those that the respondents considered important. The eleven statements with means of 2.35 or more are referred to as those that the respondents considered unimportant. The 22 statements with means between 1.83 and 2.35 are not discussed.
4. Deviation on "importance": The eleven statements with standard deviations of .96 or less are referred to as those on which the respondents experienced consensus (with respect to importance). The eleven statements with standard deviations of 1.17 or more are referred to as those on which the respondents experienced dissensus. The 23 statements with standard deviations between .96 and 1.17 are not discussed.

This use of quartiles also permits analysis in terms of four additional categories, based on the standard deviations for the agreement scale and the means for the importance scale. When the extreme quartiles of these two statistics are cross-tabulated, the following categories result:

1. Ideology: Statements that are considered important, and on which there is consensus with respect to agreement.
2. New issue: Statements that are considered unimportant, and on which there is dissensus with respect to agreement.
3. Debate: Statements that are considered important, and on which there is dissensus with respect to agreement.
4. Dead issue: Statements that are considered unimportant, and on which there is consensus with respect to agreement.

In other words, if a statement is considered important to the field and there is consensus on its validity, then that statement is said to constitute part of the ideology of environmental education. If the respondents consider a statement unimportant and experience dissensus in their opinions on it, then it is viewed as a new issue to the field (or possibly an irrelevant one). If a statement is considered important but the respondents experience dissensus in their attitudes toward it, then it is interpreted as a living debate in the field.

And finally, if a statement is considered unimportant despite a consensus in attitudes toward it, then for environmental education it is a dead issue.

Before the analysis begins, one additional point should be made. Many of the 45 statements in the questionnaire represent complex value positions. A large number of respondents indicated that they had substantial difficulty determining their own position on particular statements, often because they agreed with part of a statement and disagreed with another part. This is entirely consistent with the real-world complexity of environmental issues and environmental attitudes, but it sometimes makes interpretation difficult. Readers should note that in many cases there is more than one possible reason why respondents may have disagreed with a statement. Since so many of the statements are multi-dimensional in this way, the project staff has not attempted to scale the 45 statements in any way, except according to the particular emerging issue to which each statement is connected.

Attitudes of the Respondents

In the analysis that follows, the 45 statements are first considered in groups of five, in terms of the emerging issue to which each statement is relevant. For each emerging issue, in order, the five relevant statements and the four statistics for each statement are presented in tabular form; those statistics that fall into an extreme quartile are

identified as such. The written discussion summarizes and interprets the results reported in the tables. After this issue-by-issue analysis, those of the 45 statements that qualify as ideology, debates, or new issues (there were no dead issues) are discussed again in that context.

As mentioned before, the comparison of the attitudes of the respondents with the attitudes of the conference participants will be saved for the third and final section of this chapter.

Social Justice. Looking first at the cluster of statements dealing with social justice (Table 3), we see two statements with which the respondents agreed. No. 19 says that it is vital for environmental educators to learn how to motivate environmental awareness in inner city youth. Respondents also experienced consensus on this value statement. No. 37 says that environmental educators should be pursuing social justice and the social implications of potential environmental policies in the classroom and probably in the political arena as well. There also was consensus with regard to agreement on this statement. Respondents as a group disagreed with the statement that environmental quality and social justice are independent issues, but there was not consensus on this matter. At the same time it is interesting to note the relatively low level of agreement with the statement that environmentalists concentrate too much on issues like wilderness preservation

TABLE 3

SOCIAL JUSTICE STATEMENTS

<u>Number and Description</u>	<u>Mean Agree</u>	<u>Deviation Agree</u>	<u>Mean Important</u>	<u>Deviation Important</u>
(1) environmental quality and social justice are independent goals	3.93 Disagree	1.33	2.01	1.23 Dissensus
(10) too much emphasis on wilderness preservation	2.42	1.28	1.91	.96 Consensus
(19) should learn to motivate environmental awareness in inner city youth	1.81 Agree	1.02 Consensus	1.83 Important	1.02
(28) deal with policy questions in terms of general public needs	3.07	1.39 Dissensus	2.41 Unimportant	.96 Consensus
(37) pursue social justice in the classroom and probably in the political arena	1.87 Agree	1.12 Consensus	1.97	1.04

instead of the more pressing environmental burdens on inner city residents, the poor, etc.

In looking at how respondents assessed the importance of these social justice statements, we see that only one was considered important--that environmental educators should be learning how to motivate environmental awareness in inner city youth. Low importance (and consensus on that low level of importance) was accorded to the idea that environmental education should deal with policy questions mostly in terms of general public needs, not the specialized needs or wants of particular cultural, ethnic, or other groups of citizens.

Responses to both the agreement and the importance scales reveal two patterns. The position that environmental educators should learn to teach environmental awareness to inner city youth classifies as an ideology. That is, there was consensus with regard to agreement on this statement, and respondents accorded it high importance. The position that environmental educators should deal with policy issues in terms of general public needs rather than the needs of special groups classifies as a new issue. That is, there was dissensus with regard to agreement on this matter, and the respondents considered it unimportant.

Overall, then, environmental educators seem relatively uncritical of the way the field currently treats social justice issues. Although the respondents agreed that environmental quality and social justice are related goals, and

that environmental educators should pay attention to social justice, neither point was considered especially important. The important thing, according to the respondents, is to motivate environmental concern among inner city people-- which apparently means concern for such issues as wilderness preservation. This seems to be a manifestation of the familiar pattern of concentrating on society's victims rather than on the social system that produces the victims. The goal of focusing environmental education more on the needs of oppressed people and the causes of their oppression was not rejected by the respondents; it was simply considered much less important (so far) than the goal of motivating oppressed people to be concerned about traditional environmental issues.

Constituency. The environmental educators in the survey agreed with two of the five questions asked about the constituency of environmentalism--No. 20, that the true environmentalist acts on behalf of all living things, not just people; and No. 11, that the environmental movement should build more alliances with traditionally powerful groups such as government, industry, and educational institutions. There was consensus that the true environmentalist acts on behalf of all living things. The responses to the other three constituency questions did not reach either "agreement" or "disagreement" levels. This is interesting

TABLE 4

CONSTITUENCY STATEMENTS

<u>Number and Description</u>	<u>Mean Agree</u>	<u>Deviation Agree</u>	<u>Mean Important</u>	<u>Deviation Important</u>
(2) goal of environmental education is to reverse environmental backlash and combat public's dwindling commitment to environmental quality	2.30	1.29	2.02	1.16 Dissensus
(11) environmental movement should build more alliances with traditionally powerful groups in society	1.93 Agree	1.13	1.83 Important	.96 Consensus
(20) true environmentalist acts on behalf of all living things, not just people	1.80 Agree	.92 Consensus	2.06	1.02
(29) environmental movement considers itself accountable to no one but itself and has failed to respond to needs and wants of people outside itself	2.72	1.31	2.29	1.11
(38) survival of humanity is ultimate goal of environmentalism and must take precedence over special needs of population groups	2.55	1.28	2.15	1.04

since these questions asked about whether a goal of environmental education is to combat environmental backlash, whether the environmental movement considers itself accountable only to itself, and whether the survival of humanity is the ultimate goal of environmentalism and should take over the special needs of particular groups.

Only one of the five questions was considered important by the respondents--that the environmental movement should build more alliances with traditionally powerful groups; there was consensus on the importance of this issue. The other four issues were considered intermediate in importance, though there was dissensus on the importance of fighting the environmental backlash.

Environmental educators, it seems, have not come to a definitive decision about the relationship of the survival of humanity to the special needs of particular groups, about whom the environmental movement is accountable to, or about whether environmental education should work to reverse environmental backlash. None of the five statements qualifies as an element of ideology, a new issue, a matter of debate, or a dead issue as we defined these terms earlier.

As environmental educators face the differentiation of interest groups in our society, the differences in power among those groups, and the consequent conflicts, their goals are to act on behalf of all living things and to seek alliances with traditionally powerful institutions. They

have no clear opinion on, and no strong interest in, the accountability of the environmental movement, the role of environmental education in the face of diminished social commitment to environmental quality, or the potential conflict between the survival of humanity and the special needs of particular groups.

Economics. The environmental educators in the sample disagreed with three of the five statements (see Table 5) pertaining to economics and environmental education, and agreed with none of them. They were in most disagreement with the idea that people will not accept an environmentalism that demands a significant change in their economic standard of living. They disagreed also with the assertion that there is no contradiction between the goals of environmentalism and the American economic system (but there was dissensus on this statement), and with the view that it is pointless for environmental education to consider the economic repercussions of environmental policies until it first succeeds in arousing concern for environmental quality.

In looking at how the respondents felt about the importance of these statements, we see that three out of five of the economics statements were judged important--that there is no contradiction between the goals of environmentalism and the American economic system, that people will not accept an environmentalism that demands a significant change in their

TABLE 5

ECONOMICS STATEMENTS

<u>Number and Description</u>	<u>Mean Agree</u>	<u>Deviation Agree</u>	<u>Mean Important</u>	<u>Deviation Important</u>
(3) no contradiction between goals of environmentalism and the American economic system	3.61 Disagree	1.36 Dissensus	1.75 Important	1.97 Dissensus
(12) environmental quality can't be achieved until developed countries like U.S. give up or lose disproportionate control over economic benefits of world resources	3.08	1.40 Dissensus	2.42 Unimportant	1.17 Dissensus
(21) people will not accept an environmentalism that demands a significant change in economic standard of living and self-defeating for environmental education to promote these changes.	3.72 Disagree	1.26	1.74 Important	.89 Consensus
(30) pointless for environmental education to consider economic repercussions of environmental policies until first succeeds in arousing concern for environmental quality.	3.53 Disagree	1.32	2.23	1.05

TABLE 5 (Continued)

ECONOMICS STATEMENTS

<u>Number and Description</u>	<u>Mean Agree</u>	<u>Deviation Agree</u>	<u>Mean Important</u>	<u>Deviation Important</u>
(39) in short run environmental improvement will be to economic disadvantage of many Americans, and environmentalists must devise ways of lessening hardship, especially on the poor	2.28	1.38 Dissensus	1.83 Important	.92 Consensus

economic standard of living, and that in the short run environmental improvement will be to the economic disadvantage of many Americans and environmentalists must devise ways of lessening this hardship. Respondents experienced dissensus on the importance of the first of these issues, consensus on the other two. One issue was considered unimportant by the respondents--that environmental quality can't be achieved until developed countries like the United States give up or lose their disproportionate control over the world's resources. There was dissensus about the low importance accorded this matter.

In looking at the results for both the "agreement" and the "importance" scales, we see that a new issue (dissensus with regard to agreement and low importance) to the field is that environmental quality can't be achieved until developed countries give up or lose their disproportionate control over the world's resources. Here is a matter closely related to the social justice issue discussed earlier, and here again the field has yet to establish a position or accord the matter very much importance. Two statements in this cluster qualify as debates (dissensus with regard to agreement and high importance--that there is no contradiction between the goals of environmentalism and the American economic system, and that short-run environmental improvement will be to the economic disadvantage of many Americans and environmentalists must devise

ways of lessening the hardship, especially on the poor.

Overall, then, environmental educators seem to regard economic issues as important to their field, but are still confused on how the field should deal with those issues. They see a conflict between environmentalism and the American economic system, but are not interested in U.S. domination over world resources as an environmental-economic issue. They believe that environmental education should consider the economic repercussions of environmental policies, and that it is possible and important to get people to accept environmentalism despite its potential negative impact on our standard of living, yet they are not entirely convinced that environmentalists must devise ways of lessening the hardship on the poor. One senses from these responses a value holding that the environment is everyone's problem and everyone's fault, and that Third World countries and poor people should be expected to bear the economic burden no less than developed countries and wealthy people.

Autonomy. The environmental educators in the sample agreed (see Table 6) that environmental education should get people to understand the environment and that commitment and sensitivity will follow. While the respondents did not agree or disagree on the other four statements in this area, there was dissensus with regard to agreement on two of the

TABLE 6

AUTONOMY STATEMENTS

<u>Number and Description</u>	<u>Mean Agree</u>	<u>Deviation Agree</u>	<u>Mean Important</u>	<u>Deviation Important</u>
(4) get people to understand the environment and how it works; commitment and sensitivity will follow from understanding	2.15 Agree	1.27	1.59 Important	.93 Consensus
(13) goal of environmental education is to influence the student to become different than he or she was before	2.35	1.47 Dissensus	2.26	1.33 Dissensus
(22) little point in clarifying student's environmental values unless these values, once clarified, are likely to be environmentally sound	3.30	1.62 Dissensus	2.08	1.08
(31) environmental educators have obligation to avoid propaganda, "behavior modification," or other manipulative approaches	2.23	1.24	2.10	1.01
(40) non-directive styles are better able to change the fundamental values of the learner, and are thus valuable to environmental education but only if teacher can control the nature of the change	3.24	1.26	2.61 Unimportant	1.18 Dissensus

statements--that the goal of environmental education is to influence the student to become different than he or she was before, and that there is little point in clarifying students' environmental values unless the values once clarified are likely to be environmentally sound.

Of the five statements in the autonomy cluster, only the one emphasizing that environmental education should get people to understand the environment was considered important, and there was consensus on its importance. That non-directive teaching styles are better able to change the fundamental values of the learner and are valuable only if the changes are controlled by the teacher was judged to be of low importance, but there was dissensus about this judgment of importance. None of the autonomy statements qualified as an ideology, a debate, a new issue, or a dead issue.

To the extent that environmental educators are concerned about issues of learner autonomy, then, it seems they put heavy stress on cognitive understanding and the faith that this understanding will lead to commitment and sensitivity. This was the only statement with which the respondents agreed, and the only one they considered important. Much more ambiguity emerged about the role of environmental education in trying to change the attitudes, values, or behaviors of learners. There was dissensus and not much importance attached to the question of whether

environmental education aims to change its students. In keeping with this, the respondents had no clear position on whether values clarification is useful even if it does not lead to sound environmental values, on the ethics of manipulative teaching, or on the role of teacher control in non-directive learning situations. A clear viewpoint and a high level of importance on such issues is apparently unnecessary for a group whose principal concern is the intellectual understanding acquired by students.

Skills. The responses to all five statements (see Table 7) pertaining to skills and environmental education were sufficiently extreme that it can be said that environmental educators either agree or disagree strongly with each statement. The respondents agreed that it is appropriate for environmental educators and their students to become deeply involved in community environmental controversies, and that environmental educators should devote more effort to helping learners acquire environmental skills so students can take effective action. There was consensus on both statements. The environmental educators in the sample disagreed with the other three statements--that because of successful teacher education most environmental educators already have a repertoire of teaching skills sufficient for their needs; that existing environmental education curricula are well designed to encourage students to

TABLE 7

SKILLS STATEMENTS

<u>Number and Description</u>	<u>Mean Agree</u>	<u>Deviation Agree</u>	<u>Mean Important</u>	<u>Deviation Important</u>
(5) because of successful teacher education most environmental educators already have repertoire of teaching skills sufficient for their needs	4.32 Disagree	.95 Consensus	1.71 Important	1.05
(14) environmental educators should avoid teaching the sorts of skills that may attract learners to counter-cultural life styles	3.74 Disagree	1.30	2.55 Unimportant	1.21 Dissensus
(23) appropriate for environmental educators and their students to become deeply involved in community environmental controversies and help solve local environmental problems	1.49 Agree	.90 Consensus	1.45 Important	.69 Consensus
(32) environmental educators should devote more effort to helping learners acquire environmental skills so students can take effective action	1.59 Agree	.82 Consensus	1.65 Important	.81 Consensus
(41) existing environmental education curricula are well designed to encourage students to become knowledgeable, skilled citizens active in community environmental issues	3.73 Disagree	1.05 Consensus	1.71 Important	.97

become knowledgeable, skilled citizens; and that environmental educators should avoid teaching the sorts of skills that may attract learners to counter-cultural life styles. For the first two but not the third of these disagreements there was consensus among the respondents.

All five of the statements pertaining to skills also qualified as either important or unimportant. The only statement accorded low importance (with dissensus about the judgment) was the one concerning the teaching of skills that attract learners to counter-cultural life styles. High importance was accorded the statements pertaining to involvement in community environmental controversies (with consensus among respondents), helping learners acquire environmental skills (with consensus among respondents), the education of environmental educators, and the design of existing environmental education curricula.

Looking at both the "agreement" and the "importance" scales for the five statements, we see that four of them qualify as elements of the ideology of environmental education (consensus on agreement and high importance). Only the statement about avoiding teaching skills that might lead to counter-cultural life styles does not qualify as part of the ideology.

It is clear from these responses that environmental educators consider skills issues extremely important, and have a well-articulated viewpoint on those issues. The

respondents agreed that they and their students should be deeply involved in community environmental controversies, and that more effort should be devoted to helping students acquire skills for effective action; both statements were also considered important. At the same time, the respondents asserted that environmental educators do not now have an adequate repertoire of teaching skills, and that current curricula do an inadequate job of helping students become knowledgeable, skilled, active citizens on environmental issues--and these statements were considered important as well. Environmental educators, in short, are dissatisfied with their own skills and the skills they are now imparting to students, and are committed to doing a better job in the future of involving themselves and their classes in effective local environmental action.

Formal Education. The environmental educators studied (see Table 8) agreed that it is important for environmental educators to devote more time to working with factory workers, community officials, the elderly, and other adult audiences, perhaps through the mass media. Furthermore, there was consensus on this matter. They disagreed with two statements--that environmental education can't be fully accepted by school systems until national standards are developed and implemented, and that the most practical and satisfactory

TABLE 8

FORMAL EDUCATION STATEMENTS

<u>Number and Description</u>	<u>Mean Agree</u>	<u>Deviation Agree</u>	<u>Mean Important</u>	<u>Deviation Important</u>
(6) important for environmental educators to devote more time to adult audience, perhaps through mass media	1.98 Agree	1.08 Consensus	1.98	1.01
(15) environmental education can't be fully accepted by school systems until national standards and models are developed and implemented	3.84 Disagree	1.27	2.55 Unimportant	1.29 Dissensus
(24) important for environmental educators to avoid approaches that are likely to threaten or challenge the school system	3.48	1.28	2.11	1.03
(33) most practical and satisfactory way to teach environmental education in the schools is as a separate discipline	4.19 Disagree	1.13	2.03	1.22
(42) environmental education is so different from most school subjects that it will be impossible to do the job effectively without challenging and changing the structure and process of the typical American school system	3.25	1.47 Dissensus	2.18	1.18 Dissensus

way to teach environmental education in the schools is as a separate discipline.

None of the five statements pertaining to formal education was considered important. Only one was considered unimportant (and there was dissensus on that)--the need for national standards for environmental education.

Looking at both the "agreement" and the "importance" scales, we see that for environmental education none of these statements qualifies as an element of ideology, a matter of debate, a new issue, or a dead issue.

It is interesting to note that the respondents neither agreed nor disagreed with the assertion that it is important for environmental educators to avoid approaches that are likely to threaten or challenge the school system. Also, they did not consider this an important issue. When asked whether environmental education required challenging and changing the structure and process of the typical American school system, again the respondents neither agreed nor disagreed, and again they did not consider the issue important (though there was dissensus on both judgments).

From these data we see that environmental educators don't want environmental education taught as a separate discipline, don't feel a need for national standards, and don't care enormously about either issue. They want to pay more attention to adults, but don't think that's especially important either. They are not conceptually clear about

whether or not their job requires challenging and changing the structure and process of the typical American school system, nor are they conceptually clear about whether they should or should not avoid approaches that are likely to threaten the school system; neither issue is considered important. It seems that the environmental educators questioned do not have (and do not feel they need) a clear strategy or set of tactics for introducing and developing environmental education in school systems.

Local-Global. The environmental educators studied (see Table 9) agreed with two of the five local-global statements-- that it is important for environmental education to look carefully at the political, economic, social, and environmental value system of this country and to analyze the impact of these cultural assumptions on environmental quality, locally, nationally, and internationally; and that new organizations and curriculum materials are needed that encourage both local and international approaches to the environment, instead of the current overemphasis on national problems. There was consensus on both statements. On a closely related issue, the respondents disagreed with the statement that environmental education often puts too much stress on local issues instead of concentrating on more important regional and national phenomena.

TABLE 9

LOCAL-GLOBAL STATEMENTS

<u>Number and Description</u>	<u>Mean Agree</u>	<u>Deviation Agree</u>	<u>Mean Important</u>	<u>Deviation Important</u>
(7) let the global context of environmental education emerge from the principles of ecology rather than from details of international resource policy	3.10	1.36 Dissensus	2.20	1.08
(16) environmental education should look carefully at the political, economic, social and environmental value system of this country	1.29 Agree	.69 Consensus	1.35 Important	.69 Consensus
(25) many environmental educators are trained in atmosphere of American provincialism that makes it difficult to consider the earth as interrelated in a decisive way	2.67	1.29	2.51 Unimportant	1.14
(34) new materials and organizations should be developed, stressing local and international approaches instead of national ones	2.19 Agree	1.06 Consensus	2.27	1.01
(43) environmental education often puts too much stress on local issues instead of concentrating on more important regional and national phenomena	3.53 Disagree	1.10	2.35 Unimportant	.95

The only statement judged to be of high importance was that environmental education should look carefully at the value system of this country and analyze its impact on environmental quality. Low importance was accorded to two statements--that many environmental educators have inevitably been socialized and trained within an atmosphere of American provincialism that makes it very difficult to consider the earth as interrelated in a decisive way, and that too much stress is put on local issues as opposed to regional and national phenomena.

In looking at both the "agreement" and the "importance" scales, we see that one statement constitutes an element of the ideology of environmental education. This is the assertion that environmental education should look carefully at the value system of this country and analyze its impact on environmental quality.

From these responses it is clear that environmental educators would like to see more attention paid to both local and international issues. The respondents agreed with the statement that more local and international materials and organizations are needed, and disagreed with the statement that too much stress is now put on local issues instead of regional and national ones. However, neither statement was considered important, and the second one qualified as unimportant. Local versus global perspectives are apparently an issue that does not preoccupy environmental educators

very much, except for one aspect of it: the need to examine the environmental impact of American values.

Although the respondents were firmly committed to looking carefully at environmental value systems in this country, they were uncertain whether the global context of environmental education should emerge from ecological principles or from an explicit examination of international resource policy (from biophysical or from sociopolitical consideration). And they had no opinion in either direction about the effects of American provincialism on the training of environmental educators; this issue was considered unimportant. Environmental educators, in other words, are not yet concerned about the limits of their own education and values as these might affect their efforts to teach from a global perspective.

Values. The environmental educators questioned agreed with none of the five values statements, and disagreed with two (see Table 10)--that the environmental ethic deals essentially with attitudes toward the biophysical environment and is neither founded on nor inconsistent with the fundamental social values of our society, and that the values environmental education should transmit are consistent with the values in the educational processes as whole and thus need little special attention in designing environmental curricula.

TABLE 10

VALUES STATEMENTS

<u>Number and Description</u>	<u>Mean Agree</u>	<u>Deviation Agree</u>	<u>Mean Important</u>	<u>Deviation Important</u>
(8) environmental educators inevitably share some of the profoundly anti-environmental values of our society	2.60	1.24	2.50 Unimportant	1.24 Dissensus
(17) environmentalism endures through its close link with traditional religious and cultural values	3.23	1.41 Dissensus	2.57 Unimportant	1.23 Dissensus
(26) environmental ethic deals essentially with attitudes toward the biophysical environment and is not inconsistent with fundamental social values of our society	3.82 Disagree	1.34	1.94	1.10
(35) values environmental education should transmit are consistent with values in educational process as a whole	3.74 Disagree	1.24	2.03	1.02
(44) high priority of environmental education should be to devise better ways to undermine established anti-environmental values and inculcate new environmentally sound ones	3.00	1.48 Dissensus	2.42 Unimportant	1.28 Dissensus

These two statements were considered neither important nor unimportant. The other three were judged to be of low importance to the group of environmental educators questioned, though in each case there was dissensus about this judgement. The following statements ranked as unimportant: (1) environmental educators inevitably share some of the profoundly anti-environmental values of our society; (2) environmentalism endures through to its close link with traditional religious and cultural values, and efforts to depict environmentalism as revolutionary are inaccurate and misguided; and (3) a high priority of environmental education should be to devise better ways to undermine established anti-environmental values and inculcate new environmentally sound ones.

An examination of both the "agreement" and the "importance" scales shows that two of the values statements qualify as new issues (dissensus on agreement and low importance)--that environmentalism endures through its link with traditional religious and cultural values, and efforts to depict environmentalism as revolutionary are inaccurate and misguided; and that a high priority of environmental education should be to devise better ways to undermine established anti-environmental values and inculcate new environmentally sound ones.

Environmental educators, in short, understand and believe that the environmental ethic is not isolated from

fundamental social values, and see some inconsistency between the values to be transmitted by environmental education and the values inherent in the educational process as a whole. They are only beginning to consider the link between environmentalism and traditional values, and the role of environmental education in undermining established values and inculcating new ones. They have no clear opinion on whether their own values share the society's anti-environmental bias. And they do not yet consider any of these issues especially important.

Support System. Of the five statements dealing with the support system for environmental education (see Table 11), the respondents disagreed with none and agreed with only one--that community members of all sorts should participate in the design and implementation of environmental education curricula. There was consensus on this matter.

The participation of community members in the design and implementation of environmental education was also judged to be highly important, and there was consensus on that judgment. One statement was considered unimportant--that parental opposition should not be allowed to scuttle environmental education innovations.

In examining both the "agreement" and the "importance" scales, we see that the need for community participation

TABLE 11

SUPPORT SYSTEM STATEMENTS

<u>Number and Description</u>	<u>Mean Agree</u>	<u>Deviation Agree</u>	<u>Mean Important</u>	<u>Deviation Important</u>
(9) environmental education should be a diverse movement dominated by independent local efforts	2.90	1.38 Dissensus	2.15	.95 Consensus
(18) students should have substantial real control over design and implementation of environmental education programs	2.55	1.19	2.29	1.02
(27) parental opposition to environmental education innovations should not be permitted to scuttle programs that professional environmental educators consider valuable	2.53	1.20	2.48 Unimportant	1.08
(36) to encourage increased funding environmental educators should design programs that will be attractive to governmental agencies, industry, etc.	2.57	1.33	2.19	1.08
(45) community members of all sorts should participate in the design and implementation of environmental education curricula	1.77 Agree	1.07 Consensus	1.73 Important	.93 Consensus

qualifies as an element of the ideology of environmental education. None of the other statements qualified as an ideology, a new issue, a debate, or a dead issue.

The statement that students should have substantial real control over the design and implementation of environmental education programs achieved neither agreement nor disagreement, neither importance nor unimportance. The same was true of the statement that environmental educators should encourage increased funding by designing programs that would be attractive to government agencies, industry, etc. There was dissensus over whether or not environmental education should be a diverse movement dominated by independent local efforts; this issue, too, was judged neither important nor unimportant.

In summary, there seems to be a great deal of unclarity among environmental educators about the character of the support system for environmental education. Beyond agreement that community members of all kinds should participate in the design and implementation of curricula, respondents had no clear opinion about the role of student control, the role of possible parental opposition, the desired impact of funding sources, or whether environmental education should be a diverse movement dominated by independent local efforts. Except for broad-based community participation, these support system issues are not considered very important.

So far we have examined the survey responses only in terms of the nine emerging issues. In the process, we have identified some statements that qualified as matters of ideology, as debates, as new issues, or as dead issues. Another way of understanding the attitudes of environmental educators toward the emerging issues is to consider these four categories separately, across all nine emerging issues. No statements on the questionnaire qualified as dead issues (consensus on agreement and low importance). We turn now to the results for the other three categories.

Ideologies. Looking first at the category of ideology (see Table 12), we see that seven statements fell within this category. For a statement to qualify for inclusion here, there had to be consensus on agreement (the standard deviation on the agreement scale had to be in the lowest quartile) and the statement had to be judged high in importance to environmental education (the mean on the importance scale had to be in the lowest quartile).

A major area of ideology seems to be the relationship of environmental education to the community. In this regard the respondents believed with consensus and considered it important that:

1. It is appropriate for environmental educators and their students to become deeply involved in community

TABLE 12

"IDEOLOGY" STATEMENTS

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5. Largely because of successful pre-service and in-service teacher education programs, most environmental educators already have a repertoire of relevant teaching skills sufficient for their needs; further skills training for environmental educators themselves is not a high priority. (Disagree, Consensus, High Importance)
 16. It is important for environmental educators to look carefully at the political, economic, social, and environmental value systems of this country, and to analyze the impact of these cultural assumptions on environmental quality locally, nationally, and internationally. (Agree, Consensus, High Importance)
 19. It is vital for environmental educators to learn how to motivate broad environmental awareness in minority and inner city youth, who tend to be too little concerned about environmental quality. (Agree, Consensus, High Importance)
 23. It is appropriate for environmental educators and their students to become deeply involved in community environmental controversies, and to identify, publicize, and attempt to help solve local environmental problems that are not being dealt with. (Agree, Consensus, High Importance)
 32. Environmental educators should devote more effort to helping learners acquire relevant environmental skills, so that students will be able to take effective action to deal with environmental problems. (Agree, Consensus, High Importance)
 41. Existing environmental education curricula are well designed to encourage students in becoming knowledgeable, skilled citizens active in community environmental issues. (Disagree, Consensus, High Importance)
 45. Community members of all sorts, from industry leaders to local environmental activists, should participate in the design and implementation of environmental education curricula. (Agree, Consensus, High Importance)
-

environmental controversies, and to identify, publicize, and attempt to help solve local environmental problems that are not being dealt with.

2. Existing environmental education curricula are not well designed to encourage students in becoming knowledgeable, skilled citizens active in community environmental issues.

3. Community members of all sorts, from local industry leaders to local environmental activists, should participate in the design and implementation of environmental education curricula.

4. Environmental educators should devote more effort to helping learners acquire relevant environmental skills, so that students will be able to take effective action to deal with environmental problems.

These areas of ideology indicate commitment to an unusual goal in American public education--involvement of students and teachers in community controversies as active participants. It is not surprising that existing curricula are not considered adequate to achieve such a goal, and that additional training for students in action-related skills is seen as essential. To meet these needs environmental educators are committed to another unusual practice for American public education--involving community members of all sorts in the design and implementation of environmental education curricula.

A second area of ideology in environmental education pertains to the environmental educators themselves. It is a matter of ideology that environmental educators, because of insufficient pre-service and in-service training, lack a repertoire of relevant teaching skills sufficient for their needs, and that further skills training for environmental educators is thus a high priority. It is also a matter of ideology that environmental educators should learn how to motivate environmental awareness in minority and inner city youth.

A third area of ideology pertains to the analysis on which environmental education rests. The ideology is that it is important for environmental educators to look carefully at the political, economic, social, and environmental value systems of this country, and to analyze the impact of these cultural assumptions on environmental quality locally, nationally and internationally.

Debates. Only two of the 45 statements (see Table 13) qualified as debates. For a statement to qualify for inclusion, there had to be dissensus on agreement and the statement had to be judged high in importance.

Both of the statements that qualified pertain to the economic considerations that underlie the diagnosis and solution of environmental problems. There was dissensus among environmental educators on whether or not there is an

TABLE 13
"DEBATE" STATEMENTS

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3. There is no essential contradiction between the goals of environmentalism and the American economic system; radical economic change is not required to achieve environmental quality. (Disagree, Dissensus, High Importance)
39. At least in the short run, environmental improvement will be to the economic disadvantage of many Americans, and environmentalists must devise ways of lessening the hardship, especially on the poor who are most vulnerable and least responsible for environmental degradation. (Dissensus, High Importance)
-

essential contradiction between the goals of environmentalism and the American economic system, and whether radical economic change will be required to achieve environmental quality. Despite the dissensus, the balance of opinion was that an essential contradiction does exist and that radical economic change will be required. The short-term meaning of this situation was also a matter of debate. There was dissensus among environmental educators on whether, at least in the short run, environmental improvement will be to the economic disadvantage of many Americans, and whether environmentalists must devise ways of lessening this hardship, particularly on the poor.

An interesting contrast emerges between these two debates on the one hand, and the elements of ideology discussed earlier on the other hand. Part of the ideology of environmental education, according to the survey results, is the involvement of environmental educators and their students in community controversies, and the involvement of community people in environmental education. Yet there is debate as to whether the goals of such involvement require radical change in the American economic system, and whether environmental improvement will be to the disadvantage of certain groups whose hardship must be lessened. These debates encompass areas of great potential conflict between entrenched powers and disadvantaged, the rich and the poor. As environmental educators work for increasing

community involvement, they will be under pressure to develop a firm position on such conflicts. The nature and extent of the interaction between environmental education and the community will depend largely on how the field finally resolves (and helps students to resolve) these debates.

New Issues. The last category of statements to be examined are the new issues. Four of the 45 statements (see Table 14) qualify as new issues. For a statement to qualify for this category, there had to be dissensus on agreement and the statement had to be considered of low importance.

In these new issues we find further evidence that environmental education has yet to grapple with the relationship between environmental quality and social conflict. Three of the four new issues concern this fundamental problem--whether environmental quality requires that the United States lose its disproportionate control over the world's resources; whether environmentalism is tied to traditional values or is revolutionary; and whether environmental education should deal with general public needs or the specialized needs of particular groups. For all three statements, the respondents could not agree on a position, and considered the issue unimportant.

TABLE 14

"NEW ISSUE" STATEMENTS

-
12. Environmental quality probably cannot be achieved until developed countries like the United States give up or lose their disproportionate control over the economic benefits of the world's resources. (Dissensus, Low Importance)
 17. Environmentalism endures through its close link with traditional religious and cultural values; efforts to depict environmentalism as revolutionary are inaccurate and misguided. (Dissensus, Low Importance)
 28. Environmental education should deal with policy questions mostly in terms of general public needs, not the specialized needs or wants of particular cultural, ethnic, or other groups of citizens. (Dissensus, Low Importance)
 44. A high priority for environmental education should be to devise better ways to undermine established anti-environmental values and inculcate new environmentally sound ones. (Dissensus, Low Importance)
-

Involvement in community environmental controversies-- a goal that is part of the current ideology of environmental education-- inevitably means involvement in conflict between interest groups. As a field, environmental education has not yet recognized this inevitability, and has not yet begun to consider which groups it will support and which it will oppose. The implications of this pending decision are staggering; it will profoundly affect the support system for environmental education, its approach to skills training, values, and constituency, its orientation toward social justice and economics, etc.

The fourth new issue, that environmental education should try to undermine established values and inculcate new ones, is also related to the question of intergroup conflict. As long as environmental educators do not fully believe that environmentalism is a societal battle, they will see no need to change people's values. And as long as they take no side in that battle, they will be unable to determine which values need changing, and in which directions. Under these constraints can environmental education become a part of the solution, rather than a part of the problem?

As of 1974, environmental educators are committed to playing an active role in environmental controversies, but are reluctant to choose a side. This is an unstable

position, and it will change. The question is how soon, and in what direction. Will environmental education try to create for itself a niche as neutral "mediator" in environmental conflicts? Will it withdraw from those conflicts and return to traditional, fact-oriented teaching? Or will it engage in those conflicts as an open partisan, fighting for environmental quality and social justice for all people? That is, perhaps, the most basic emerging issue in environmental education.

Comparison with Conference Participants.

The final section of this chapter compares the survey results just discussed with the responses to the same questionnaire of the twenty conference participants. The participants completed the questionnaire Monday evening, before beginning the conference but after reading the pre-conference papers. The differences found may thus reflect either the sorts of people who attended the conference as opposed to those in the larger sample, or the impact of the pre-conference papers, or both.

As a group, the conference participants were significantly younger than the general sample and had fewer years of experience in environmental education. More of the participants were women, and more were members of minority groups. Although a number of conference participants were long-time leaders in environmental education, just as many

came to the conference from tangential fields.

In the analysis that follows, we will once again consider the 45 statements in groups of five, according to which of the nine emerging issues each statement was intended to illuminate. For each statement, four means are presented in tabular form--first the "agreement" scale for both the larger sample and the conference participants, then the "importance" scale for the larger sample and the participants. Differences between the two samples are marked with an asterisk (*) if the t-test was significant at the .10 level of confidence, and with a double asterisk (**) if it was significant at the .01 level of confidence. These significant differences are interpreted in the discussion that accompanies the tables.

In examining the tables, the reader should bear in mind that low numbers represent agreement rather than disagreement, and importance rather than unimportance.

Social Justice. The participants (see Table 15) consistently accorded greater importance to the statements dealing with social justice than did the sample of environmental educators who responded to the questionnaire prior to the conference. The difference between these two groups was large enough to be statistically significant for two statements, concerning the interdependence of environmental quality and social justice, and the need for

TABLE 15
SOCIAL JUSTICE COMPARISON

<u>Number and Description</u>	<u>Agreement</u>		<u>Importance</u>	
	<u>Field</u>	<u>Conf.</u>	<u>Field</u>	<u>Conf.</u>
(1) environmental quality and social justice are independent goals	3.93	4.33	2.01	1.17**
(10) too much emphasis on wilderness preservation	2.42	1.83*	1.91	1.60
(19) should learn to motivate environmental awareness in inner city youth	1.81	2.17	1.83	1.59
(28) deal with policy questions in terms of general public needs	3.07	4.00**	2.41	2.11
(37) pursue social justice in the classroom and probably in the political arena	1.87	1.41*	1.97	1.47*

*significant at $p < .10$

**significant at $p < .01$

environmental educators to pursue social justice.

In terms of their agreement with the statements, the participants consistently adopted more of a "social justice position" than the larger sample. The differences were statistically significant for three statements--that there has been too much emphasis on wilderness preservation versus the environmental burdens of inner city residents, that environmental education should deal with policy questions in terms of the specialized needs of subpopulations as opposed to general public needs, and that environmental educators should pursue social justice in the classroom and probably the political arena.

Constituency. While the two groups (see Table 16) did not differ significantly in their judgments on the importance of the constituency statements, the conference participants did as a general pattern accord more importance to these statements than the larger sample of environmental educators.

The participants agreed significantly less than the larger sample with the statement that the environmental movement should build more alliances with the traditionally powerful groups in society, and also with the statement that the true environmentalist acts on behalf of all living things, not just people. From these differences we see that the participants were more comfortable than the larger sample

TABLE 16

CONSTITUENCY COMPARISON

<u>Number and Description</u>	<u>Agreement</u>		<u>Importance</u>	
	<u>Field</u>	<u>Conf.</u>	<u>Field</u>	<u>Conf.</u>
(2) goal of environmental education is to reverse environmental backlash and combat public's dwindling commitment to environmental quality	2.30	2.33	2.02	2.17
(11) environmental movement should build more alliances with traditionally powerful groups in society	1.93	2.56*	1.83	1.72
(20) true environmentalist acts on behalf of all living things, not just people	1.80	2.35*	2.06	1.94
(29) environmental movement considers itself accountable to no one but itself and has failed to respond to needs and wants of people outside of itself	2.72	2.61	2.29	2.06
(38) survival of humanity is ultimate goal of environmentalism and must take precedence over special needs of particular groups	2.55	2.82	2.15	1.94

*significant at $p < .10$

**significant at $p < .01$

with the idea that environmentalism involves conflict with the power structure of society, and an emphasis on the needs of people.

Economics. On the subject of economics (see Table 17), two statements were considered more important by the conference participants than by the larger sample--the contradiction between environmentalism and the American economic system, and the need for developed countries to give up their control over world resources.

The participants also had significantly different opinions on both statements. That is, they believed more strongly than the larger sample that the goal of environmental quality is incompatible with both the U.S. economic system and the developed countries' control of world resources. In addition, the participants agreed to a greater extent than the larger sample that environmental improvement will work economic hardship on the poor and that environmentalists should be responsible for lessening the burden.

Autonomy. The conference participants considered two statements significantly more important than the larger sample of environmental educators (see Table 18)--that the goal of environmental education is to influence the student to become different, and that it is important to use non-directive styles because of their effectiveness, but only

TABLE 17
ECONOMICS COMPARISON

<u>Number and Description</u>	<u>Agreement</u>		<u>Importance</u>	
	<u>Field</u>	<u>Conf.</u>	<u>Field</u>	<u>Conf.</u>
(3) no contradiction between goals of environmentalism and the American economic system	3.61	4.39*	1.75	1.22*
(12) environmental quality can't be achieved until developed countries like U.S. give up or lose disproportionate control over economic benefits of world's resources	3.08	2.11**	2.42	1.44
(21) people will not accept an environmentalism that demands a significant change in economic standard of living and self defeating for environmental education to promote these changes	3.72	3.78	1.74	2.06
(30) pointless for environmental education to consider economic repercussions of environmental policies until first succeeds in arousing concern for environmental quality	3.53	3.76	2.23	2.12
(39) in short run environmental improvement will be to economic disadvantage of many Americans, and environmentalists must devise ways of lessening hardship, especially on the poor	2.28	1.65*	1.83	1.47

*significant at $p < .10$
**significant at $p < .01$

TABLE 18

AUTONOMY COMPARISON

<u>Number and Description</u>	<u>Agreement</u>		<u>Importance</u>	
	<u>Field</u>	<u>Conf.</u>	<u>Field</u>	<u>Conf.</u>
(4) get people to understand the environment and how it works; commitment and sensitivity will follow from understanding	2.15	2.56	1.59	1.72
(13) goal of environmental education is to influence the student to become different than he or she was before	2.35	1.89	2.26	1.33**
(22) little point in clarifying students' environmental values unless these values, once clarified, are likely to be environmentally sound	3.30	3.44	2.08	1.89
(31) environmental educators have obligation to avoid propaganda, "behavior modification", or other manipulative approaches	2.23	2.71	2.10	1.88
(40) non-directive styles are better able to change the fundamental values of the learner and are thus valuable to environmental education but only if teacher can control the nature of the change	3.24	3.71	2.61	1.86*

*significant at $p < .10$

**significant at $p < .01$

when the teacher can control the nature of the change. In general, except for statement No. 4, the participants considered learner autonomy more important than the larger sample did.

In terms of the level of agreement with this set of learner autonomy statements, the two samples did not differ significantly on any statement. However, the overall pattern of differences seemed to indicate that the participants were more inclined to see the role of the environmental educator as an agent of change with the student as the target of change.

Skills. There were no significant differences (see Table 19) between the two samples on the importance they accorded to skills training considerations in environmental education.

One statement produced a significant difference in agreement. The participants disagreed more strongly than the larger sample with the statement that environmental educators should avoid teaching the sorts of skills that might attract learners to counter-cultural life styles. The other differences in agreement were very small.

Formal Education. Among the questionnaire statements focusing on formal education (see Table 20), the two samples differed significantly on the importance of only one. The conference participants judged as more important the issue of whether fundamental school system change is

TABLE 19

SKILLS COMPARISON

<u>Number and Description</u>	<u>Agreement</u>		<u>Importance</u>	
	<u>Field</u>	<u>Conf.</u>	<u>Field</u>	<u>Conf.</u>
(5) because of successful teacher education most environmental educators already have repertoire of teaching skills sufficient for their needs	4.32	4.28	1.71	1.78
(14) environmental educators should avoid teaching the sorts of skills that may attract learners to counter-cultural life styles	3.74	4.50	2.55	2.17
(23) appropriate for environmental educators and their students to become deeply involved in community environmental controversies and help solve local environmental problems	1.49	1.56	1.46	1.61
(32) environmental educators should devote more effort to helping learners acquire environmental skills so students can take effective action	1.59	1.47	1.65	1.41
(41) existing environmental education curricula are well designed to encourage students to become knowledgeable skilled citizens active in community environmental issues	3.73	3.59	1.71	1.71

*significant at $p < .10$

**significant at $p < .01$

TABLE 20

FORMAL EDUCATION COMPARISON

<u>Number and Description</u>	<u>Agreement</u>		<u>Importance</u>	
	<u>Field</u>	<u>Conf.</u>	<u>Field</u>	<u>Conf.</u>
(6) important for environmental educators to devote more time to adult audience, perhaps through mass media	1.98	1.72	1.98	1.67
(15) environmental education can't be fully accepted by school systems until national standards and models are developed and implemented	3.84	3.61	2.55	2.56
(24) important for environmental educators to avoid approaches that are likely to threaten or challenge the school system	3.48	3.72	2.11	1.94
(33) most practical and satisfactory way to teach environmental education in the schools is as a separate discipline	4.19	4.63*	2.03	1.75
(42) environmental education is so different from most school subjects that it will be impossible to do the job effectively without challenging and changing the structure and process of the typical American school system	3.25	2.00**	2.18	1.59*

*significant at $p < .10$

**significant at $p < .01$

needed in order to teach environmental education effectively.

The participants disagreed more than the larger sample of environmental educators with the statement that the most satisfactory and practical way to teach environmental education is as a separate discipline. In addition, the participants as opposed to the larger sample were significantly more in agreement with the statement that for environmental educators to do the job effectively they must challenge and change the structure and process of the typical American school system.

Local-Global. The participants at the conference and the larger sample of environmental educators (see Table 21) did not differ significantly in their assessment of the importance of the five local-global questionnaire statements.

In only one case did the two samples differ significantly in their level of agreement with a statement. The participants registered a significantly higher level of agreement than the larger sample with the statement that new materials and organizations should be developed that stress local and international issues as opposed to national approaches to environmental education.

Values. The participants saw one statement (see Table 22) as significantly more important than the larger sample--that environmental education should devise better ways to undermine established anti-environmental values and inculcate environmentally sound ones.

TABLE 21

LOCAL-GLOBAL COMPARISON

<u>Number and Description</u>	<u>Agreement</u>		<u>Importance</u>	
	<u>Field</u>	<u>Conf.</u>	<u>Field</u>	<u>Conf.</u>
(7) let the global context of environmental education emerge from the principles of ecology rather than from details of international resource policy	3.10	3.44	2.20	1.94
(16) environmental education should look carefully at the political, economic, social and environmental value system of this country	1.29	1.39	1.35	1.39
(25) many environmental educators are trained in atmosphere of American provincialism that makes it difficult to consider the earth as interrelated in a decisive way	2.67	2.56	2.51	2.56
(34) new materials and organizations should be developed, stressing local and international approaches instead of national ones	2.19	1.59*	2.27	2.00
(43) environmental education often puts too much stress on local issues instead of concentrating on more important regional and national phenomena	3.53	3.12	2.35	2.35

*significant at $p < .10$

**significant at $p < .01$

TABLE 22

VALUES COMPARISON

<u>Number and Description</u>	<u>Agreement</u>		<u>Importance</u>	
	<u>Field</u>	<u>Conf.</u>	<u>Field</u>	<u>Conf.</u>
(8) environmental educators inevitably share some of the profoundly anti-environmental values of our society	2.60	2.17*	2.50	2.28
(17) environmentalism endures through its close link with traditional religious and cultural values	3.23	3.29	2.57	2.39
(26) environmental ethic deals essentially with attitudes toward the biophysical environment and is not inconsistent with fundamental social values of our society	3.82	3.89	1.94	2.28
(35) values environmental education should transmit are consistent with values in educational process as a whole	3.74	3.82	2.03	2.06
(44) high priority of environmental education should be to devise better ways to undermine established anti-environmental values and inculcate new environmentally sound ones	3.00	2.13*	2.42	1.69*

*significant at $p < .10$

**significant at $p < .01$

Similarly, the participants agreed with this statement at a significantly higher level than the larger sample. The participants agreed more with one additional statement as well--that environmental educators inevitably share some of the profoundly anti-environmental values of our society.

Support System. The participants judged one statement as significantly more important than the larger sample (see Table 23)--that students should have substantial control over environmental education programs.

The participants also agreed with this statement to a significantly greater extent than the larger sample. Two other significant differences of opinion emerged--the participants were more willing to let parental opposition scuttle environmental education programs, and they were less in favor of designing programs that are attractive to government agencies and industry in order to gain additional funding for environmental education.

When we look at the overall differences for all 45 statements, a consistent pattern emerges. The conference participants, as a group, were less traditional in their diagnosis of environmental problems and their goals for environmental education than the larger sample of environmental educators. They were more inclined to see environmentalism and environmental education as inevitably and appropriately involved in conflict with the established

TABLE 23

SUPPORT SYSTEM COMPARISON

<u>Number and Description</u>	<u>Agreement</u>		<u>Importance</u>	
	<u>Field</u>	<u>Conf.</u>	<u>Field</u>	<u>Conf.</u>
(9) environmental education should be a diverse movement dominated by independent local efforts	2.90	3.00	2.15	2.22
(18) students should have substantial real control over design and implementation of environmental education programs	2.55	1.89*	2.29	1.83*
(27) parental opposition to environmental education innovations should not be permitted to scuttle programs that professional environmental educators consider valuable	2.53	3.06*	2.48	2.28
(36) to encourage increased funding environmental educators should design programs that will be attractive to government agencies, industry, etc.	2.57	3.25*	2.19	2.56
(45) community members of all sorts should participate in the design and implementation of environmental education curricula	1.77	1.82	1.73	2.06

*significant at $p < .10$

**significant at $p < .01$

order--conflict over social justice, over economic and international issues, and over values. And they were more responsive to the implications of conflict--implications for the environmental movement's constituency and support system, for the skills offered to students and the autonomy accorded them, and for the relationship between environmental education and traditional education.

Even more obviously, the conference participants were more interested in the nine emerging issues than the larger sample. Of the nine statements on which the two samples reached significant differences in their judgments of importance, all nine differences were in the same direction: The conference participants thought the statement more important than the larger sample. Out of a total of 45 statements, 31 (69 percent) were considered more important by the participants than by the larger sample; only 12 were considered more important by the larger sample, and two pairs of means were identical.

However, it is at least as vital to bear in mind that only nine statements produced differences in importance judgments that were statistically significant at the .10 level of confidence. And only 17 statements produced significant differences in agreement. For the majority of the statements, in other words, the two samples were not far apart in their views on the statement or in their assessments of its importance.

When one considers that the conference participants were selected largely on the basis of demonstrated interest in the emerging issues, while the larger sample was selected largely on the basis of successful grant applications to the Office of Environmental Education, the small size of the differences between them is indeed striking. The mainstream of professional success in environmental education is not so very different from the cutting edge of attention to the emerging issues. This is a conclusion that should be enormously encouraging to both groups.

CHAPTER FIVE

Check Points for Environmental Education

The following is an instrument designed to assist:

(a) a project staff in designing or evaluating its own environmental education project; (b) an outside technical assistance team requested to review an environmental education project; (c) the staff of a granting agency or proposal readers for the agency attempting to evaluate environmental education project proposals; or (d) target groups or constituencies of a proposed or ongoing environmental education project who wish to judge the project or suggest changes.

This instrument is not designed to constitute an inflexible set of mandatory criteria that all environmental education projects must satisfy. Rather, it is to serve as a set of check points or guidelines to assist a writer, participant, or evaluator of an environmental education project. It is the view of the authors that such a list can be valuable in project development and review. While the authors firmly believe that every item on the list is desirable for environmental education, it does not follow that every item should be a part of every project. Rather, every item should be considered, and consciously and explicitly

designed in or out of every environmental education project.

The philosophical stance underlying this document is neither totally centrist nor totally pluralist. The authors believe that national check lists of this sort are a valuable contribution to environmental education, especially when interpreted by individual practitioners and constituencies, but also when utilized by evaluators and funding agencies. However, the authors do not believe that one such set of guidelines is sufficient. It is hoped that other individuals and groups will develop their own lists of check points, tailored to their own values and goals, and share them with colleagues and funding agencies.

This instrument was prepared at the request of the Division of Technology and Environmental Education (formerly the Office of Environmental Education) of the Department of Health, Education and Welfare. It is based mainly on the discussions at a national working conference on "Emerging Issues in Environmental Education," held in Ann Arbor, Michigan, in June, 1974, and on a survey of environmental educators and a set of research papers undertaken in preparation for that conference. The synthesis represented by the list of check points is of course that of the project staff, and not every check point is necessarily endorsed by every conference participant.

However, it should be noted that all twenty conference participants have seen and criticized a rough draft of the

instrument. In addition, the final version was sent to all conference participants for formal comment. These comments are an integral part of the instrument, and are incorporated as Section Seven.

This document is appropriate for use by both professional and lay people. Periodic review and adjustment to meet changing conditions, new ideas, and emerging issues is strongly recommended. Readers are also urged to adapt the instrument to meet their own needs, accepting those parts they find useful and explicitly rejecting those parts they consider irrelevant or inappropriate. However, the integrity of the document must be preserved. The "Check Points for Environmental Education of the University of Michigan National Conference on Emerging Issues in Environmental Education" is this entire document, including this introduction, all the check points listed, the section on the evaluation process, and all the formal comments that conclude the instrument. Should the Division of Technology and Environmental, or any other user, modify the instrument in any way, it can no longer be identified by that title.

Section One: Project Goals

Degree of Fulfillment

- | | 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 1. The project's main focus is on people and their environment, including the relationship of environmental matters to the total human environment. | | | | | | |

2. The project emphasizes environmental matters and social issues of current or emerging concern to the field of environmental education. 0 1 2 3 4 5
3. The project indicates ways in which the program identifies and discourages the exploitation of people and natural resources. 0 1 2 3 4 5
4. The project identifies and explains its contribution to a more equitable distribution of wealth and power, or at least indicates the relationship between current distribution of wealth and power and current environmental and social conditions. 0 1 2 3 4 5
5. The project provides an opportunity for the learner to focus on ecological, economic, political, social, and technological interrelationships. 0 1 2 3 4 5

6. The project integrates a global perspective on environmental concerns with local perspectives. The project is directed toward the learner's immediate environment, but includes a global diagnosis of problems and solutions.
7. The project allows the participant to acquire "how to learn" techniques for analyzing new situations, weighing alternatives, and testing solutions in real life situations.
8. The project is designed to increase the learner's interest in, awareness of, and sensitivity toward the effects of different environmental decisions on people and their environment.
9. The project emphasizes the process of value formation about oneself, one's life goals, and the formation about social and natural environment.

10. The project emphasizes identification of major value positions and ideological perspectives on the functioning of political, economic and social systems. 0 1 2 3 4 5
11. The project emphasizes a participant-centered design involving each participant in choosing priorities both as to the issues to be studied and the solutions that seem most appropriate. 0 1 2 3 4 5
12. The project encourages participants to reach their own conclusions regarding alternative approaches to environmental problems, rather than accept a predetermined solution. 0 1 2 3 4 5
13. The project encourages the study of personal and group values in the assessment of strategies and goals for change. 0 1 2 3 4 5

- | | | | | | | |
|---|---|---|---|---|---|---|
| 14. The project stresses problem-solving skill development, including not only problem diagnosis but also action to achieve solutions in a political context. | 0 | 1 | 2 | 3 | 4 | 5 |
| 15. The project regards skill sharing among participants as a high priority. | 0 | 1 | 2 | 3 | 4 | 5 |

Section Two: Project Design

- | | Degree of Fulfillment | | | | | |
|---|-----------------------|---|---|---|---|---|
| 1. The environmental education goals of the project are stated clearly. | 0 | 1 | 2 | 3 | 4 | 5 |
| 2. The project indicates clearly how the needs of the project were determined. | 0 | 1 | 2 | 3 | 4 | 5 |
| 3. The project is designed to link identified needs with program objectives. | 0 | 1 | 2 | 3 | 4 | 5 |
| 4. The objectives (specific activities that advance project goals) of the project are stated clearly. | 0 | 1 | 2 | 3 | 4 | 5 |

5. The project states clearly how 0 1 2 3 4 5
its objectives are to be achieved,
including anticipated choice
points and provisions for alter-
ing the program's operational
plan.
6. The project indicates how its 0 1 2 3 4 5
organization is related to ac-
complishing the specified goals
and objectives.
7. The project objectives are 0 1 2 3 4 5
clearly based on the learning
and other benefits to the target
group as a result of being in-
volved in the project.
8. The project identifies its con- 0 1 2 3 4 5
stituency or constituencies (for
whom it will advocate) explicitly
and clearly.
9. The target of the project (at whom 0 1 2 3 4 5
it will advocate) is identified
clearly, and the relationships
of target to constituency are ex-
plicit.

10. The project identifies clearly 0 1 2 3 4 5
the lines of accountability (re-
sponsibility) for achieving pro-
ject goals.
11. The project provides evidence 0 1 2 3 4 5
that its constituency needs and
wants the services to be pro-
vided or the products to be
produced.
12. The constituencies of the pro- 0 1 2 3 4 5
ject or their designated repre-
sentatives have been and continue
to be involved in the planning
process.
13. The project involves the politi- 0 1 2 3 4 5
cally and economically disen-
franchised (Third World people,
ethnic and cultural minorities,
women and children, etc.) in a
decision-making role.

14. The project has a time line stating approximately when project activities will start and terminate. 0 1 2 3 4 5
15. The project identifies major political, organizational, and institutional constraints in achieving each objective. 0 1 2 3 4 5
16. The project has developed strategies to help overcome the constraints identified by the project. 0 1 2 3 4 5
17. The project identifies specific ways that the project is accountable to its constituency. 0 1 2 3 4 5
18. Evidence is provided that the project will be actively supported by the constituency to be served. 0 1 2 3 4 5
19. There is evidence of solid community commitment to the project in terms of contributed person-power, services, materials, funds, etc. 0 1 2 3 4 5

20. There is strong indication that 0 1 2 3 4 5
the project staff is working with
the project's constituency.
21. The project staff is effective in 0 1 2 3 4 5
working with groups, other than
its constituency, that are im-
portant to the success of the
project.
22. The project makes use of volun- 0 1 2 3 4 5
teers and/or para-professionals
when such assistance is available
and would enhance the project.
23. The project staff is competent, 0 1 2 3 4 5
and multi-racial, includes both
sexes, and is multi-aged.
24. The project staff functions well 0 1 2 3 4 5
together as evidenced by project
atmosphere, by staff sharing and
working on project tasks, by group
cohesiveness, and by commitment to
the overall goals and objectives.
Provision should be made for group-
building and group-process work on
the part of the staff, including
volunteers.

25. The project has well-designed dissemination and training plans approved by the project's constituency. 0 1 2 3 4 5
26. The project provides specific guidelines regarding how the project will be evaluated, when the project will be evaluated, by whom the project will be evaluated, and what will be done with the evaluation. 0 1 2 3 4 5
27. The project's constituency is involved in program evaluation. 0 1 2 3 4 5
28. The project members and constituency have access to the evaluation form and evaluation report, and to this list of check points. 0 1 2 3 4 5
29. Throughout the project, there is two-way communication between the staff and the constituency. 0 1 2 3 4 5
30. The project design includes provision for modification in response to evaluative feedback from constituency and staff. 0 1 2 3 4 5

31. The project identifies who "profits" and who "loses" (and in what ways) as a result of the project. 0 1 2 3 4 5
32. The project identifies key resources important in helping to achieve the project's objectives. Resources identified for the project (including budget items, personnel, equipment and facilities) have been realistically assessed according to project goals. 0 1 2 3 4 5
33. The applicant shows evidence of having attempted to obtain funds and/or resources in excess of those required for shared funding. 0 1 2 3 4 5
34. The budget is realistic for achieving stated objectives. 0 1 2 3 4 5
35. Staff salaries are consistent with area salary schedules, the kind of work being done by the project, and the project's goals. 0 1 2 3 4 5

36. The project demonstrates sound management of funds and other resources. 0 1 2 3 4 5
37. The budget includes funds for dissemination of project results. 0 1 2 3 4 5
38. The expected or desired outcomes of the project are identified in terms of at least two of the following: a) changes in the biophysical or human environment; b) changes in the knowledge and skills of target groups or others; c) changes in the attitudes or values of target groups or others; d) changes in the behavior of target groups or others; and e) changes in the power, self-control or other control of target groups or others. 0 1 2 3 4 5
39. The project is so designed that the skills of project staff will be transferred to the target or constituency group in the course of the project (so they can carry on alone later). 0 1 2 3 4 5

Section Three: Specific Check Points for Schools (K-12)

- | | Degree of Fulfillment | | | | | |
|--|-----------------------|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 |
| 1. The project contributes to an environmental education program that spans the school program--kindergarten through the twelfth grade--thereby capitalizing on the cumulative effects of the program. | | | | | | |
| 2. The project is trans-disciplinary in that it links subject areas that relate most closely to the environment, such as science and social studies, humanities, mathematics, vocational education, etc. Thus, the social, humanistic, and scientific knowledge important in understanding and solving environmental problems are developed. | | | | | | |
| 3. The project is integrated and correlated with the existing curriculum in a manner that enhances instructional goals. | | | | | | |

4. The project is designed to in- 0 1 2 3 4 5
crease the learner's interest
in, awareness of, and sensi-
tivity toward person-made and
natural environments.
5. The project is learner-centered. 0 1 2 3 4 5
This means that the students help
decide not only what environmental
issues are to be studied, but also
how they are to be studied.
6. The project focuses on broad cur- 0 1 2 3 4 5
rent issues of specific local
importance, using a problem-
solving approach.
7. The project focuses on both the af- 0 1 2 3 4 5
fective (feeling) and cognitive
(knowing) components of attitude
formation, and the results in terms
of behavior.
8. The project emphasizes identifi- 0 1 2 3 4 5
cation of major value positions
and their implications, helping
the learner clarify his/her values
toward society and the environment.

9. The project encourages participants to utilize community and regional resources in the investigation of problems. 0 1 2 3 4 5
10. The project emphasizes problem-solving skill development. 0 1 2 3 4 5
11. The project focuses on the future of humankind. 0 1 2 3 4 5
12. The project provides for a comprehensive in-service teacher education program using well-designed student participation in the in-service process. The in-service teacher education program should operate throughout the school year; be directed at assisting teachers to increase their understanding, interest, awareness, and teaching skills in relation to environmental problems; focus on student-centered learning; and involve teachers in curriculum development. 0 1 2 3 4 5

- | | | | | | | |
|---|---|---|---|---|---|---|
| 13. The project is supported (not just endorsed) by students; by non-educational interests, organizations, and groups in the community; and by school staff and administration. Support refers to contribution of resources, participation in the project, and the intent to use the content or processes developed by the project. | 0 | 1 | 2 | 3 | 4 | 5 |
| 14. The project incorporates activities in addition to instruction (materials development, teacher training, etc.). | 0 | 1 | 2 | 3 | 4 | 5 |
| 15. The project encourages students to raise environmental questions and concerns in other classes. | 0 | 1 | 2 | 3 | 4 | 5 |

Section Four: Specific Check Points for Community Organizations

- | | | | | | | |
|--|-----------------------|---|---|---|---|---|
| | Degree of Fulfillment | | | | | |
| 1. The project design engages participants in active learning activities, such as: lobbying, | 0 | 1 | 2 | 3 | 4 | 5 |

- | | | | | | | |
|---|---|---|---|---|---|---|
| environmental monitoring, community surveys, institutional research, community organizing, etc. | 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
-
- | | | | | | | |
|--|---|---|---|---|---|---|
| 2. The project emphasizes problem solving, and issue-centered learning in the context of comprehensive societal diagnosis. | 0 | 1 | 2 | 3 | 4 | 5 |
|--|---|---|---|---|---|---|
-
- | | | | | | | |
|--|---|---|---|---|---|---|
| 3. The project is a cooperative or coalitional venture incorporating support and ideas from other groups or organizations. | 0 | 1 | 2 | 3 | 4 | 5 |
|--|---|---|---|---|---|---|
-
- | | | | | | | |
|--|---|---|---|---|---|---|
| 4. The project approach is multidisciplinary in that resources from many disciplines and informal sources are available. | 0 | 1 | 2 | 3 | 4 | 5 |
|--|---|---|---|---|---|---|
-
- | | | | | | | |
|---|---|---|---|---|---|---|
| 5. The proposed activities of the project are compatible with the values, concerns, goals, lifestyles and available time of the participants. | 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|

6. Participants or representatives of target groups have been involved in planning the project proposal and activities. 0 1 2 3 4 5
7. The project staff understands its role in relation to the community and to the goals and objectives of the project. 0 1 2 3 4 5
8. The project staff is familiar with various models of change and is explicitly working to operationalize one or several of these models. 0 1 2 3 4 5
9. The project staff is skilled in the diagnosis of community power and in coalition building, and is familiar with analysis of the concentration of power and the politics of power. 0 1 2 3 4 5
10. The project staff is clear about strategies for change, the limits of the strategies chosen, and the relationship of chosen strategies to major forces for societal change. 0 1 2 3 4 5

11. The project staff has had successful experience in working with community groups.
- 0 1 2 3 4 5

Section Five: Specific Check Points for Environmental Communication

- | | Degree of Fulfillment | | | | | |
|--|-----------------------|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 |
| 1. The technical expertise necessary for the project is described and available. | 0 | 1 | 2 | 3 | 4 | 5 |
| 2. The educational expertise necessary for the project is described and available. | 0 | 1 | 2 | 3 | 4 | 5 |
| 3. The project explicitly identifies target groups and constituency groups, and distinguishes them if they are different. (Communication projects are especially likely to be aimed at people other than those on behalf of whom they are designed.) | 0 | 1 | 2 | 3 | 4 | 5 |
| 4. The information to be disseminated by the project is clearly related to the needs of the target group. | 0 | 1 | 2 | 3 | 4 | 5 |

The analysis of these needs, as seen by the project, its constituency, and/or the target group itself, is explicit.

5. If the project is designed to sup- 0 1 2 3 4 5
plement another activity (such as
curriculum materials to help
teachers and students), the relation-
ship to the primary activity is
explained.
6. The project will create a communi- 0 1 2 3 4 5
cation network among individuals,
groups, organizations and insti-
tutions that will outlive the
project itself.
7. The information to be disseminated 0 1 2 3 4 5
emphasizes understanding of en-
vironmental principles and social
change processes, not just the
acquisition of factual or techni-
cal knowledge.
8. The project identifies ways in 0 1 2 3 4 5
which the program communication

will be two-way. Communication to the program (especially from target groups) is provided for as well as communication from the program.

9. The project identifies the extent 0 1 2 3 4 5
to which and the manner in which
communication "gate-keeping" will
take place. This is especially
vital for "clearinghouse" types
of projects, which must specify
what sorts of communications they
will filter out and what sorts
they will let through.

10. Project design explicitly pro- 0 1 2 3 4 5
vides for the participation of
constituency groups in determining
communication strategy and con-
tent.

11. The goals of the project are 0 1 2 3 4 5
articulated in terms of changes
in the target group--attitude
clarification or change, behavior

change, etc. The relationship of the information to be disseminated to these change goals is explicit and convincing, and shows an understanding of the relationships among information, attitudes, and behavior.

12. The project specifies ways in 0 1 2 3 4 5
which program communications are
designed to strengthen the group
cohesion and power of constituency
groups.
13. Project design includes a com- 0 1 2 3 4 5
ponent of skills-building (in-
cluding skills in communication)
to help target groups take the
actions they decide or are en-
couraged to take.
14. Project design shows consideration 0 1 2 3 4 5
of the need for democritization of
knowledge. That is, target groups
for information are those with
relatively less access to that in-
formation currently.

15. Project design shows awareness of 0 1 2 3 4 5
inability of information to affect
people unless they already preceive
a need for that information. The
project should document that tar-
get groups already perceive this
need, or should plan to create
that perception.
16. The project identifies communi- 0 1 2 3 4 5
cation strategies it is or is not
willing to utilize--e.g. manipu-
lative advertising sorts of
strategies. If controversial
communication strategies are en-
dorsed, these are defended ex-
plicitly in terms of the dis-
tinction between constituency
and target groups.
17. If project plans involve the co- 0 1 2 3 4 5
operation of established mass
media, project design shows an
understanding of the structural
and ideological limitations of
the media (limited space and time,
commitment to objectivity, etc.)

and indicates ways of dealing with these constraints.

18. Information to be conveyed in 0 1 2 3 4 5
the project is oriented to the
principles of ecology, coping
strategies for dealing with deg-
radation of the environment,
discussion of environmental pro-
blems that are not yet crises,
and assessment of moral, political,
and practical responsibility--not
just the recounting of events
("news").

19. Project design considers uncon- 0 1 2 3 4 5
ventional communications media
as well as conventional ones
such as newspapers, radio, and
television. Unconventional
media may range from gaming-
simulation to restaurant place-
mats. The choice of media for
the project is explicitly and
convincingly defended.

20. Information conveyed by the pro- 0 1 2 3 4 5
gram includes information on how
audience groups can get still
more information. The project in
this and other ways is open-
ended rather than closed.

21. Project design considers the rela- 0 1 2 3 4 5
tionship of mass communication to
interpersonal communication, and
the key role of the latter in dis-
seminating and comenting new ideas.
The project incorporates pro-
visions for direct interpersonal
contact within target groups, be-
tween target groups, and/or between
project staff and target groups.

Section Six: Evaluation Process

Accountability has been a heated issue over the last few years, In the past, evaluations were usually performed by professionals. There have been many examples in recent years where lay and constituency groups have requested that they become a part of the evaluation process. It is essential that the checklist provided here be accessible to constituency groups who want to be a part of the evaluation

process. For accountability it is necessary that constituency groups be integrally involved in the evaluation.

Prior to evaluating a program, it is important to build support among the project staff and project constituency for program evaluation. An effort should be made to interest at least ten percent of the constituency in the evaluation process. The constituency should meet with the project staff to design the best strategy for evaluating the project. The project evaluators should:

- 1) read over each question and become familiar with the content;
- 2) select people within the organization that should be interviewed (organization members at all levels should be interviewed, including janitors, maintenance people, cooks, etc.);
- 3) organize themselves into teams to collect the information outlined in the evaluation form.

In carrying out the evaluation, people who have a variety of perspectives pertaining to the project should be formally surveyed or informally interviewed, in order to obtain an overall feeling regarding the effectiveness of the project.

Getting the views of the constituency may necessitate a random sampling technique. This technique is not difficult and is used by social scientists to obtain accurate information about a population without testing each individual in the population, which would be costly and time

consuming. For example, consider how this would work in a school situation.

When conducting a questionnaire survey it is usually feasible to contact only a small portion of the student body and the teaching and administrative staff. In order to ensure that your results are valid, care should be given to the selection of the population for interview. In drawing a sample, these guidelines should be considered:

- 1) The size of your sample for evaluation should be no less than 10 percent of the total number (e.g. a school with 1,500 students requires at least 150 interviewees).
 - 2) Use alphabetical lists of students in the school (obtain permission from the principal to use the student roster and then take every tenth name on the alphabetical list). It is important that nearly everyone selected respond.
 - 3) Remember that the larger your sample the more work you will have to do in tabulating the results.
- After the data have been collected, the results should be fed back to your constituency in a public meeting. The same principles apply to sampling the individuals involved in community organization or environmental communication projects.

In evaluating a project, strive for specific recommendations concerning ways to improve the project. Recommendations should be offered in a manner that is constructive,

and a time line should be established for the enactment of such recommendations.

If recommended changes are not achieved within a designated period of time, then the evaluators should go to the next level of authority in the decision-making process.

The results of the evaluation should be sent to the sponsoring agency.

Section Seven: Formal Comments

Formal comment on this instrument was solicited from the twenty participants in the national conference on "Emerging Issues in Environmental Education," on which the instrument was based. The letters reproduced on the following pages were submitted in response to this solicitation, and are an integral part of the instrument.

TO INTERESTED ENVIRONMENTAL EDUCATORS:

The preceding checkpoints for environmental education translate well the seemingly unwieldy scope of the field into clearly defined, concrete project/proposal elements. I am quite satisfied with the list and need only comment on its potential use by those in the field.

As stated in the introduction to Chapter 5, not all these checkpoints are applicable to each and every EE project. Yet, I also see a danger that certain checkpoints, especially those dealing with political, social and economic issues, will be disregarded as seemingly peripheral or unimportant.

For example, one might ignore the point of involving the politically and economically disenfranchised in a project (Section 2: Project Design, Item #13). This can be done easily by throwing one's hands up in bewilderment as to how to go about instituting that involvement, or by denying that Third World peoples, ethnic and cultural minorities, women, children, etc. are disenfranchised. Yet the importance of items like this one is in their potential to make us aware of these questions, examine them and try to establish their connections to the state of our environments.

I see the checkpoints providing both practical guideposts to traditional projects and legitimacy and direction in structuring new projects which will truly encompass and tackle the full range of environmental questions, from the personal to the global.

Anne Adamcewicz

Solid Cincinnati reads The Cincinnati Enquirer



The
Cincinnati
Enquirer

617 Vine Street, Cincinnati, Ohio 45201
(513) 721-2700

December 12, 1974

School of Natural Resources
University of Michigan
430 E. University Street
Ann Arbor, Michigan 48104

To Environmental Educators:

I concur with the University of Michigan staff that the "Checkpoints for Environmental Education" can be valuable in project development and review.

It is important that one be aware of all decisions and nondecisions related to a project proposal. Overlooked items may demand redirection of a project, which requires expenditure of time and energy and undoubtedly produces anxiety in meeting terms of the grant contract.

I have no disagreement with the checkpoints as presented.

Sincerely,

Jo-Ann Albers
Environment Reporter
The Cincinnati Enquirer

JA/rd

The Northern Rockies Action Group Inc.

Number Nine Placer Street
Helena, Montana 59601
(406) 442-6615

January 9, 1975

To Interested Environmental Advocates,

My comments concerning the checkpoints are related more to the overall checklist than they are to specific aspects of the list.

General:

A. The checkpoint listing is exhaustive and covers to my satisfaction the prerequisite criteria that must be considered in evaluating any environmental education project. I particularly approve of the strong social justice base from which the checkpoints came.

B. I do have problems with the exhaustive nature of the checkpoints. Moreover, many are not easy to immediately assimilate, which may well limit their use in that you overwhelm people by the very sight of such an extensive list.

C. How are you going to get people to use such a checkpoint list? The way that it is now presented will turn off most people. It's too much and to make matters worse, it looks longer than it really is. I would consider outlining a sample checkpoint list for, say, a community organization project. I would put it together so that it is not as long and yet still does the job. In other words, the existing format will turn people off.

Specific:

A. In the goals section, #4 - I would omit "to a more" and put "toward a". The qualification is inappropriate in a goals statement. In #6, I would remove "global" and replace with "macro" or "total".

B. The design section is too long. In #13 the decision making role must be qualified to say "in a meaningful (or equitable) decision-making role." In #19, what do the words "solid" and "community" mean? It's unclear. Number 23 can conflict with some projects whereby specific disenfranchised groups need to do a project "in house" in order to cope with dominant racist, sexist and ageist values. The Youth Project is a good example, as well as some existing black or Native American group projects. I do not understand the need for #33.

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C. In the Community Organization section, I felt the checkpoints were exceptional, especially #8 - 10.

D. In the Communications section, #16 is unclear. Does defending a controversial strategy in explicit "them and us" terms mean its alright to manipulate outside the constituency group but not inside? If so, other criteria should be the basis of using a controversial strategy. One's goal, audience, characteristics, media access and group resources all seem to be better criteria than the one I'm interpreting from the original statement.

I do hope the Division of Technology and Environmental Education takes seriously these checkpoints. I strongly urge that they be adopted to judge Office grants and mini-grants. Moreover, serious thought must be given to disseminating these checkpoints in a convincing fashion so that people in the field can and will use them.

Sincerely,

William L. Bryan, Jr.

William L. Bryan, Jr.
Coordinator

WLE/lw

Appendix

RESPONSES OF PARTICIPANTS

The letters reproduced on the following pages were written by participants in the national conference on "Emerging Issues in Environmental Education," in response to these proceedings of the conference.

To Conference Staff:

Reading the proceedings has only served to frustrate me. The document is intolerably long and some sections, while exposing some interesting opinions and important insights, often reveal more of our human foibles and problems in personal interaction than striking points about environmental education.

Yet buried amidst all the jargon and verbosity, I see some valuable, catalytic bits of information, awareness and support for the issues with which we dealt. If these can be distilled, disseminated and employed, I feel the conference will prove worthwhile to the field.

Anne Adamcewicz

Solid Cincinnati reads The Cincinnati Enquirer



The
Cincinnati
Enquirer

517 Vine Street, Cincinnati, Ohio 45201
(513) 721-2700

December 12, 1974

University of Michigan
430 East University Street
Ann Arbor, Michigan 48104

To the Conference Staff:

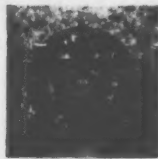
Your condensation of the conference matches my recollections. I continue to be impressed by the expertise and concern for good environmental education that you all appear to have.

The experience was rewarding for me, both as a reporter and an inhabitant of this Spaceship Earth.

Sincerely,

Jo-Ann Albers
Environment Reporter
The Cincinnati Enquirer

JA/rd



THE OHIO STATE UNIVERSITY

January 6, 1975

Mr. Pete Sandman
The University of Michigan
School of Natural Resources
430 East University Street
Ann Arbor, Michigan 48104

Dear Pete:

I have reviewed the "Emerging Issues" proceedings with considerable interest. I think you have done a reasonable job of pinpointing the various issues included on the agenda.

I am extremely concerned that what is now happening is identical to "the conservation movement" of the 1930's and 40's. We are now attempting to incorporate every human and environmental issue into one program that some are attempting to call Environmental Education. The combining of all of the issues into one big package will simply destroy all the momentum that has been generated to this point, as has been the case previously. If you will remember, Christian Temperance, Womens' Suffrage, and Anti-Trust were all issues combined in the first conservation movement, and where did it get us, right into the dust bowl.

I would make a strong plea to utilize the cognitive, affect and psycho-motor (skill) delineated in the environmental education model that I previously published in The Journal of Environmental Education. This was a useful look at where we are presently and it has helped me to determine an array of approaches that should be avoided. It has also helped to focus more clearly on the national and international dimensions that need increased support.

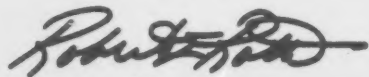
Mr. Pete Sandman

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January 6, 1975

Thank you for the opportunity and I look forward to seeing you and the rest of your colleagues again.

Cordially yours,

A handwritten signature in dark ink, appearing to read "Robert E. Roth". The signature is stylized with a large, looped "R" and a trailing flourish.

Robert E. Roth, Chairman
Division of Environmental Education

RER:yi

The Northern Rockies Action Group Inc.

Number Nine Placer Street

Helena, Montana 59601

(406) 442-6615

January 8, 1975

Dear Conference Staff,

Concerning a conference evaluation, I believe I filled out an evaluation form at the end of the conference. I'm sure that gives a much more accurate assessment than what I might come up with now. In any event, some comments are in order here that might not have appeared earlier.

A. The conference was extremely well run and a fascinating experience. I doubt if there has been any other federally funded endeavor in environmental education that has brought together such a unique and diverse group of resources to tackle head-on the real issues (as I see them) confronting environmental educators today. The only mechanical problems that I saw involved the setting of the conference and little teamwork between staff and students who had been involved in conference planning in one form or the other.

B. The proceedings are excellent - a good reference document as it now stands. However, if the material in the document is not disseminated any further or in another manner, it would be an enormous waste of valuable information. Not only should the checkpoints be widely disseminated, but also variations of the background papers and conference evaluation. Can a lengthy article be published on "Emerging Issues in Environmental Education"?

I would like to see established critical thinkers in the field take each emerging issue (background paper) and expand on it. While many papers are excellent, some need improvement. Each covers a vital area; therefore, one can drop any issue but be sure it is covered accurately and provocatively. Maybe a book form is appropriate.

C. A major weakness in the conference that I perceive must be equally shared by all of us. The conference brought together fascinating people with excellent ideas that resulted in stimulating interaction and a valuable learning experience. Yet, when we left, there has been little tie with each other since then. Sure, we may each be a little better off in terms of our working effectiveness and an important document has been produced, but there should be more.

Perhaps what the entire project has not done is to invent and then insure an on-going contribution to the field. Environmental Education has short-comings in that it does not have a systemitized resource with enough clout to constantly challenge the field to push into new turf. For four days in Ann Arbor, such a resource was functioning. Once over, its history and the critical and sensitive issues raised might well be forgotten or reinterpreted in ways that are more consistant with personal self interests that are insulated from change.

What I'm saying is the Office of Environmental Education and the field in general desperately needs a constructive and creative resource that acts as a stimulant, critic and inventor, much like the Pugwash Conference group does in the field of international relations. I don't believe such people, operating independently as the conference participants are now doing, are contributing to the field anywhere near as much as they could if they were a part of an on-going advisory group to the field as a whole.

D. I would like to know where conference participants are now, headwise. Did the Ann Arbor gathering affect us in our thinking? How? In what way? In another vein, has the conference and proceedings had any effect on the Office of Environmental Education? If so, what are the tangible results? If not, why? Was it anything to do with the substance of conference material or did it concern egos, politics or other personal and political issues?

In any event, thank you for undertaking an enormous task and doing a highly credible job. Personally, it has been a very helpful experience in which to be involved. Hopefully, the conference staff concurs.

Sincerely,

William L. Bryan Jr.

William L. Bryan, Jr.
Coordinator

WLB/lw